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ORIGINAL LECTURES.

ON THE TRANSFUSION OF BLOOD.

(CENTRAL ARTERIAL TRANSFUSION.)

A Lecture delivered at the Pathological Institute of the University of Leipsic, February 2 and 3, 1882.

BY PROF. JULIUS COHNHEIM.

(Reported for THE MEDICAL NEWS, by special permission of the author, by Dr. WALTER MENDELSON, of New York.)

THAT a hæmorrhage in which more than half the total quantity of the blood is lost proves fatal, I have already told you. Let us now see, gentlemen, what the effects on the circulation will be when more than a quarter, yet less than half, the contents of the vascular system is withdrawn from the body. After a hæmorrhage of this kind the arterial pressure does not rise again as we saw it do when smaller quantities of blood were taken; but, on the contrary, stays low, and its lowness will increase the nearer the anæmia we have produced approaches the fatal limits. With a continuous low arterial pressure, however, the velocity of the blood-current has also diminished, as is shown by a longer and longer time being necessary in which to obtain the same amount of blood. As regards the heart, the incomplete filling of the ventricles sometimes causes their less frequent contraction, more commonly, however, we find the pulse more rapid than normal, owing to the fact that on account of the normal stimulus to the pneumogastric centre being diminished by the anæmia present, the heart, in consequence, beats with increased frequency. Not only is the pulse more frequent, but each individual beat is smaller, as you will see on this curve traced by the kymographion. This diminished pressure and retarded velocity continue for some time after a loss of blood amounting to $2\frac{1}{2}$ to 3 per cent. of the body's weight, yet still more striking are the changes which the composition of the blood experiences. For after the pressure has become low—and values of 40–50 mm. of mercury are not seldom obtained in the carotid of a dog from whom a good third of its blood has been withdrawn—a reversal of the normal direction which the passage of fluids takes through the walls of the capillaries ensues, and instead of a transudation from within outwards occurring, a resorption from without inwards takes place, and at the same time the lymph from the ductus thoracicus flows into the partly empty vena subclavia with increased rapidity. Lesser has shown, however, that the latter element is by no means necessary in causing a thinning of the blood after bleeding, for even after ligating the thoracic duct, the watery parts of the serum were found to continuously increase, which could only have been caused by a resorption of the fluids of the tissues. This hydration of the blood will continue until the pressure within the capillaries is equal to that of the fluids which surround them, but even when this occurs, the pressure in the arteries is by no means necessarily restored to its original height. To obtain the latter result, by far the most certain and efficient means is *the transfusion of blood; the same in kind as that which was lost.*

It is easy to see why transfusion should be so incomparably preferable to all the other means ordinarily used after hæmorrhage, it is because by it those elements of the body which have been lost are restored in the most direct and complete manner possible. The

blood thus introduced into the emptied vessels, as long as still possessed of all its vital properties, becomes at once an integral part of the new organism in which it circulates, the corpuscles remaining intact, and performing the same functions in the respiratory exchange of gases as the original ones, still remaining, do, and the fluid portions, in the same way, taking part in the formation of lymph and in the various processes of transudation. As far as performing its functions goes, it makes little difference, too, whether the blood be injected as it is, or whether it be previously defibrinated, for it is not at all probable that during a hæmorrhage there is any very serious loss of white blood globules, those which, you will remember, are so important in the formation of fibrine.

In a previous lecture I told you of the discovery made by Armin Köhler, that the fluid portions squeezed from a mass of blood which has been allowed to spontaneously coagulate, contain large quantities of fibrine-ferment, and that this fluid, when injected into the vein of a rabbit, produces almost instant death by coagulating the blood already present. I also told you that blood defibrinated by beating with rods or by any other of the usual quickly-acting mechanical means, contained either none of this dangerous "ferment" or at least so little as to be of no importance. You will, therefore, use one of the latter methods when you wish to defibrinate blood for transfusion.

A much more important consideration than defibrination or non-defibrination is that the blood used be of the same kind as that already circulating in the vessels, for only if this precaution be observed will it continue to live and perform its functions in the vascular system into which it has been introduced. A heterologous blood is not only useless, but, indeed, of the greatest danger to its recipient. It is now more than two hundred years ago that the observation was made that the injection of an unlike blood, as, for instance, that of a lamb into a fox, that of a sheep into a dog or wolf, had a most pernicious effect on the animals so treated, and it is a humiliating fact for medical science that only a therapeutical mystification of the past few years should have brought this question of the action of foreign blood in the vascular system to the crucial test of experiment. These experiments have shown that the injection of considerable quantities, as a rule not more than ten per cent. of the original amount of blood, is sufficient to cause the death of the animal used, generally within the first or second day. Most commonly lamb's blood was injected into dogs (lamb's blood had been the kind usually used by the advocates of this method in transfusion in human beings), and it is for this combination that the above figures apply. Even those dogs which had received less than ten per cent., and who consequently survived the operation, showed during the first few days following all the symptoms of grave disturbances of the system. Bloody vomiting and diarrhœa, dyspnœa, anorexia, and great prostration were observed in all in which the amount injected had not been too small. One important symptom was never absent, namely, a tendency to hæmorrhages. These hæmorrhages were in part true extravasations, found in various organs and serous cavities, and in part merely bloody discolorations from the presence of hæmoglobin in the transudations, as, for instance, in the aqueous humor and the urine. Ponick has demonstrated for hæmoglobinuria in particular, that it appears constantly after the

injection of one per cent. of foreign blood into the vessels of a dog. The reason why an unlike blood is so deleterious to the circulation and general condition of an animal is no doubt to be sought in the fact that *the serum of one species is a direct poison for the corpuscles of another*. This remarkable fact was first determined by Prévost and Dumas, and has recently been further investigated by Landois, who found that the blood corpuscles of one species were dissolved not only by the serum alone, but also by the lymph and other transudations of another. Not, however, that when two different kinds of blood are mixed, the corpuscles of each are dissolved, but the different species have corpuscles possessing unequal powers of resistance; so the corpuscles of rabbit's blood are dissolved in dog's blood or serum, while on the other hand the corpuscles of dog's blood are not destroyed by rabbit's blood. The hæmoglobinuria and the staining of the fluids of the body undoubtedly arise from the solution of the corpuscles either of the injected blood or of that already present. The other severe symptoms, however, are not so readily explained. As regards the hæmorrhagic tendency, it may depend on a dearth of functionally active red corpuscles; still we should not underrate the possible effects on the vascular walls of the free hæmoglobin, or the foreign blood itself. Whether the hæmorrhages take place by diapedesis, or by rhexis, has not been absolutely determined. More investigation, also, is needed to determine what changes in the functions of various organs are produced, especially whether any fibrine-ferment is liberated, as has been supposed by some, though in my own investigations I have not observed any extensive coagulation following the operation.

From a consideration of the foregoing facts we see that it would not only be useless, but absolutely wrong and unjustifiable to use any other but homologous blood in a case where transfusion is indicated. Among these indications the most prominent is that of anæmia produced by hæmorrhage, but there are other cases where transfusion may be practised with benefit, and those are such where it is desired to replace with fresh blood, such as has from any cause been rendered incapable of performing its functions. The latter indication, of course, is worthy of consideration only when the cause which has rendered worthless the blood already present can be ascertained, as, for instance, after poisoning with coal-gas. I cannot but express my disapproval of those measures which would substitute healthy blood for that circulating in the vessels of a patient suffering with diabetes, leucocythæmia, pyæmia, or even tuberculosis, as has been suggested by some, for in these diseases, gentlemen, the blood is but secondarily affected, and even though you were to remove the morbid blood and replace it by a healthy fluid, yet the cause of the disease would remain the same, and in a very short time the new blood would be in exactly the same state as that which had been withdrawn. In cases in which substitution is really indicated the elimination of the worthless must, of necessity, precede the introduction of the healthy blood, and the success of the operation will be in proportion to the completeness of the substitution. Panum has succeeded in replacing nearly the entire amount of the blood of one dog by the defibrinated blood of another without the animal showing the slightest symptoms of any disturbance of function. There are several different methods used for transferring new blood into the vascular system; the simplest seems to be to transfuse the blood from an artery of one individual directly into the vein of another. Still, simple as this method is, I would not recommend it to be used in transfusion in human beings—no, not even for animals. There are two great objections, the first being that one cannot determine with accuracy the amount

injected, and the second is that it is almost impossible to prevent the blood entering the vein, and consequently the right ventricle, under a high arterial pressure, a circumstance which in profoundly anæmic or poisoned individuals may be of the very gravest consequences. For the same reason I would advise you against the use of the syringe; better use a glass funnel and cannula of the same material, through which the previously defibrinated, filtered, and warmed blood may be allowed to run gently into the vein. But even this last method, experience has taught me, is not without its serious objections, for in spite of every precaution it is not always possible to prevent air-bubbles, or small coagula formed after the defibrination, being carried in the vein with the blood. Then, too, I have frequently experienced that a current of blood entering even under a pressure of not more than ten to twelve millimetres of mercury has exercised a paralyzing influence on the weakened heart, instead of stimulating it. All these dangers may be avoided by injecting the blood, not into the veins, but into the arteries.

The injection, to be sure, must not be made peripherally, for the peripheral arterial twigs will contract to such a degree as to require great force to overcome and drive the blood into the capillaries, and I have seen a hand covered with ecchymotic spots due to the bursting of capillaries from the employment of such force. The central end of the cut artery (the radial being a convenient vessel) is used, and into this the blood is injected by means of a syringe with force just sufficient to overcome the pressure in the artery. The injected blood mixes with that already present in the vessel, and flows centrally till the first large proximal branch is reached, when it is carried in a peripheral direction again into the capillaries, where it not only becomes thoroughly mixed before entering the veins, but any coagula present are detained; capillary embolism of the muscles and skin being, as you know, owing to the abundant anastomoses, of no significance whatsoever. In this way the blood reaches the heart under the same pressure as that already existing, and strained of all coagula. It is true that my experience has only been obtained from experiments on animals; but, from the successful results, I can recommend *central arterial transfusion* as the least dangerous and at the same time the most efficient method.

Ponfick has recently recommended indirect transfusion into the peritoneal cavity; but, if opposed to the direct transfusion into a vessel, I cannot see its advantages. True, the blood is absorbed, even with a certain degree of rapidity; but still very slowly when compared to the immediate absorption which occurs in direct transfusion. In cases of dangerous anæmia from hæmorrhage, therefore, where transfusion has met with its greatest successes, the peritoneal method can be of but little good; only in anæmias of slighter grade, it might compete with direct transfusion. Then, too, comes the fact that the introduction of a cannula into the peritoneal cavity of a human being is certainly no easier than into a superficial vein or artery; while, on the other hand, it is an infinitely more dangerous procedure, for, aside from everything else, the perfect disinfection of the blood used is an impossibility, and I need hardly remind you how much more dangerous infectious material is when introduced into the peritoneum than when into a bloodvessel. Indeed, I know of several cases of peritoneal transfusion, performed by some of our best and most careful operators, in which a fatal peritonitis resulted. You may urge that in a large number of cases this mode of transfusion has been very successful, but you should consider what "success" means in these cases. Really, the only cases where one can absolutely point to transfusion, as having directly saved life, are those in which death has not resulted even after the

loss of what has been proved to be a fatal amount of blood, namely, one-half. Anæmias of less degree, we know, are usually survived, and the blood is spontaneously regenerated. How much influence, in effecting this regeneration in the latter cases, is to be ascribed to the new blood introduced, must, to a large degree, depend merely on the opinion of the physician.

If we wish to avert the evil consequences of a considerable hæmorrhage by means of transfusion, we must, of course, in order to get the full benefit of the operation, inject as much, or at least nearly as much, blood as was previously lost. If this be done, the spectacle which presents itself is most striking, for from a condition of extreme anæmia, with all its attendant symptoms, the animal is rapidly and effectually restored to its normal condition. The pulse-beats become fuller, and the arterial pressure rises in exact proportion to the amount of blood injected, until at last it reaches nearly the normal limit. If the dog be now¹ removed from the operating-table, you will see him run about in a natural and lively manner, while before the transfusion you perceived he was too weak to even move a leg. This restoration is, as I have insisted on before, permanent. In experimenting on animals it is, of course, not difficult to procure as much blood as is required; but in actual practice the indications to restore the amount of blood lost are more easily presented than fulfilled, for when can three or four pounds of fresh human blood be readily obtained? As a rule, one must be content to replace but a part of the quantity lost, and although an immediate recovery is not obtained, still the patient is put in a much better condition for a spontaneous cure, for not only is the degree of anæmia diminished, but in consequence of less work being put upon the blood-producing organs, its duration also; in a word, it is as though the patient had suffered from a moderate instead of from a severe hæmorrhage.

We have seen now how, in the transfusion of homologous blood, we possess a truly ideal remedy for combating anæmia, one that in its sphere is unequalled. Indeed, it is not too much to say that, with the exception of transfusion, there is no means of restoring the normal quantity of blood, except the regenerative power inherent in the organism, and all that medication can do is to present the most favorably conditions for the execution of the latter. Unfortunately, however, our acquaintance with these conditions is as yet too imperfect to permit us to formulate any exact procedure; but one thing is certain, and that is, that for the regeneration of the blood it is absolutely necessary for the organism to be alive. The greatest danger, however, which presents itself after a severe hæmorrhage, is that the arterial pressure is diminished to a point where life for any length of time becomes impossible; therefore, any means which will increase the pressure in an anæmic individual will, of course, be highly acceptable. Such means we have in the very simple operation of transfusing a weak solution of common salt into the bloodvessels. We choose a solution whose degree of concentration shall present a fluid as nearly indifferent to the blood globules as possible. This varies slightly in different animals. For the dog a salt solution of a strength of 0.6 per cent, with perhaps 0.05 parts of sodium hydrate added to every litre, has proved to be the best. If by repeated bleeding the arterial pressure of a large, strong dog be diminished to one-half, or even one-third of its original altitude, and then a quantity of warm salt solution equal to the amount of blood withdrawn, be injected into a vein, the dog's pulse will be observed to become fuller and stronger and the arterial pressure will be seen to rise again to its original height,

and, as I have observed repeatedly, stay there for half an hour or more. Exactly when a fall again occurs, I am unable to tell you, but even in the worst cases time has been gained in which the regenerative processes may have begun to assert themselves, or during which the preparations for the transfusion of blood may be made, and besides the high arterial pressure in itself, has, it is thought, a directly beneficial influence. Kroecker and Sander affirm that in dogs who have suffered from what experience has shown to be an otherwise invariably fatal hæmorrhage, life may be saved with certainty by thus injecting an alkaline salt solution; still, we must wait for more extensive observations before we can accept this statement as the rule. I certainly would not rely on it where human life was in the balance, but would recommend that in those threatening cases where, owing to human blood not being obtainable, salt solution was injected, the operation be followed as soon as practicable by a transfusion of blood.

ORIGINAL ARTICLES.

SUPPURATIVE HEPATITIS.

EVACUATION OF A LARGE ABSCESS.

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W. E. P., a bricklayer, æt. thirty-five years, presented himself at my clinic, among other patients, about the middle of October, 1881. His general appearance was cachectic and miserable; he had a poor appetite and irregular bowels, with loose dejections; was in a state of physical and mental distress, unable to work, and despondent, apparently without hope of improvement.

His obvious trouble was a tumor extending from the right hypochondrium over the epigastric region, and bulging largely under the xiphoid cartilage. He had been working during the summer along a watercourse, and had suffered with rigors or irregular chills, which may have been malarious or suppurative. He had no fever when he presented himself for treatment. A diagnosis was made of liver disease, but the form was left for further observation. He was put, for the time being, on small doses of nitro-muriatic acid, and hot fomentations of the same, in water, were directed to be applied over the seat of the disease. After being on this treatment for a week, he returned, and reported himself as feeling better. The tumor was not so firm to the touch as at the first examination, indeed, there was appreciable fluctuation, and it appeared pretty certain that we had either cyst or abscess to deal with.

I then directed his transfer from the University Dispensary to the University Hospital for operation and treatment. When he entered the hospital, he was suffering from dyspnoea and slight cough, pain in hypogastrium and right hypochondrium; urine bile tinted, not albuminous.

When placed on the operating-table (October 31), I made a tentative exploration of the tumor with a hypodermic syringe, and withdrew some pus. Immediately thereafter I used the aspirator, the tube being carbolyzed, as was that of the syringe, and drew off, being kindly assisted by my friend, Prof. William T. Howard, eighty-five ounces (85 oz.), of

¹ This, and other experiments were made before the class.

pus, the last portions of which were somewhat blood-stained. There was nothing offensive in the character of the pus. I referred it to Dr. R. B. Morison, of the dispensary staff, for chemical and microscopical examination, who found some bile present, but did not discover liver cells in any portion examined.

When the tube was withdrawn, the puncture was sealed with collodion, covered with adhesive plaster, and a compress of oakum; and a broad bandage was so applied around the chest and abdomen as to make the lacerated parts within approach as nearly as possible.

Perfect rest was enjoined, a simple but sufficient diet, and the first medicine was the deodorized tincture of opium in doses of gtt. xxx., to be repeated, p. r. n., for relief of pain.

On the 2d of November, there was much distress from flatulence, with limited ascites, when I ordered R. Tinct. Camph., ʒij.; Glycerine, ʒvj.; Acid Carbolic, gr. iv. ℥.; S., ʒij. td., and Pulv. Doveri, gr. x., *hora somni*.

On the 7th, complaint of malaise, and general depression, rather than obvious changes, led me to think pyæmia might be impending, when I directed R. Acid Tannic, gr. v.; Spt. Frumenti, ʒj., td., in addition to other remedies, and a conditional injection of Magendie's solution (℥viii.), hypodermically.

So far pulse, temperature, and respiration had been comparatively little disturbed. On the 8th, 9th, 10th, and 11th days after the operation the temperature went up from 99° Fahr., to 101°, 102°, and 102.2° Fahr., the pulse beats from 90-95 to 112, and respiration from 20 to 30 per minute.

This change was rather ominous, occurring as it did just about the time that such change had so often indicated or preceded a fatal issue.

I then changed from tannic acid to sulph. cinchonia (gr. x. td.), and carbolic acid in larger doses, as follows: R. Acid Carbolic, gr. iiss.; Glycerine, ʒj.; Tinct. Hyos., ʒj., ℥. four times a day with the cinchonia and the Dover's powder at bedtime. For the relief of obtuse but persistent pain in right hypochondrium, a Burgundy pitch plaster was directed, which gave some relief.

Under this course of treatment the febrile symptoms steadily and rapidly abated.

Thereafter the cinchonia was reduced to gr. v. td., and brown mixture and cod-liver oil were given for cough, with gr. j. only with each dose of carbolic acid.

For some fugitive pains about the person, frictions were made with vol. liniment.

The pulse, the temperature, and respiration came down on the thirteenth day after the operation, from which time there were but slight variations from the normal standard.

On the thirtieth day after the operation the patient left the hospital in good spirits and in better health than he had been for many months. He was anxious to go to work, but I advised him to rest at home for a time, and to report himself occasionally at the hospital. He came as directed, in about a week, in good condition, and I have since learned that he had gone to work at his trade.

Two factors in the treatment seem worthy of special attention. First, the compression made to approximate the walls of the evacuated abscess, for, as Hilton says (*Rest and Pain*), "the ulterior object (of opening an abscess) is to permit and secure coaptation of the internal surfaces of the abscess, to give to its internal surfaces rest, so as to permit of their union, and further rest for the purpose of consolidating the medium of union."

The bandage was applied over the oakum compress, so as to approximate and support the parts to the utmost degree practicable.

The other important factor was the combined agency of the cinchonia and the carbolic acid, of which the patient had for some days, ten grains *per diem*. Upon the adoption of this course the alarming rise of fever was soon abated, and there was a steady progress to complete recovery.

Abscess of the liver, perhaps, occurs more frequently than we are apt to suppose, in this region, for, no doubt, from obscurity of symptoms and limited development, it is often overlooked.

In the summer of 1879 I was called in consultation to see a lady with a great fluctuating tumor in the right hypochondrium, extending downwards towards the crest of the ilium. She was rather sallow than jaundiced; stomach intensely irritable; bowels inclined to be loose, and withal so prostrate and suffering, that when I first saw her death appeared to be imminent. I learned that some weeks previously she had been treated for "chills and fevers" with calomel and quinia, but as the tumor appeared and grew, and her illness increased, she changed her medical attendant. She said she had had liver disease, with intense pain (biliary calculi?), two years previously when visiting relatives in Germany, for which she was treated in that country.

Besides the tumidity, there was a good deal of cedema and redness in the integuments, and fluctuation of fluid, to the touch, with an evident admixture of gas. She declared she would feel a great deal better if "she was cut open," and actually requested it, be the result what it might.

After a little conference it was agreed between Dr. Irons, the attending physician, and myself, that an incision should be made partially through the parietes, to be dressed with lint, which would give us time for subsequent procedures, besides inviting the matter towards the surface. The doctor made but a light touch, under my observation, when immediately a bubble of gas escaped. In the course of a few hours there commenced to run a dark, offensive, purulent fluid, containing shreds, and occasional gas bubbles. Any further incision or puncture was thus anticipated. The lady, on the next morning, though exceedingly prostrate, expressed herself as greatly relieved. Adhesive inflammation had taken place between the abscess and the abdominal parietes, and the slight touch of the scalpel proved to be a sufficient operation. Oakum and carbolic-acid dressings were sedulously used, and carbolized tents. No injections were made, nor was any drainage-tube deemed necessary. The patient was sustained for a time principally by tonics and enemata, until the stomach became tolerant of food.

Hypodermic injections had been previously used (of quinia and morphia, p. r. n.), but they were no longer needed.

I left the city for my summer vacation, and did not see the lady again for some time; but upon my return, I found that the abscess had been pretty thoroughly evacuated, and the patient fairly convalescent. I saw her, some months ago, in very good health. Whether the gas which issued was due to fetid decomposition alone, or to some little perforation which had admitted air from some of the mucous passages, is more, I think, than could be satisfactorily determined by anything short of an autopsy, the *ultima ratio* of pathologists.

Some years ago a seaman, in the University Hospital, had indications of serious hepatic disease, which found relief in the disgorgement of pus, having the taste of bile, through the bronchial tubes. He passed from under my care convalescent. I heard nothing of his subsequent history.

I am not proposing, in this paper, to offer a treatise on hepatic abscess, but merely to report a case where there was a very extraordinary amount of pus taken off with so satisfactory a result. Among records one may find that pus may exist in the liver in quantities ranging from an ounce, or less, to ninety ounces, or even a gallon, or more; but instances of such enormous quantities have only been recorded, I believe, from *post-mortem* examinations.

Allow me to conclude with a few words not bearing directly upon my subject, but still not altogether uninteresting in this connection. I turned rather out of curiosity than in hope of information, in looking up authorities, to a French *Dictionnaire de Médecine*, of the last century, in my possession, to get the views of the learned author in regard to abscess of the liver. He ignored the malady, but in his definition of the liver he gave some points not to be derived from Ainsworth nor Dunglison. *Secur*, he says, means *juxta cor*, that is, near the stomach, which the ancients called *cor*. He also informs us why the French call this organ *le foie*, "parceque, suivant le sentiment des anciens, c'est le foyer ou la cuisine où se cuit et se prépare le sang."

The *foyer* in the cases just cited failed in its supposed function, inasmuch as it only prepared or presented white or pus corpuscles in great excess, more or less vitiated.

MALIGNANT GROWTH, PROBABLY OSTEO-SARCOMA, OF THE ORBITAL WALLS,

INVOLVING ALL THE BONES OF THE FACE AND BASE OF THE SKULL, BUT MAINLY THE SPHENOID AND ETHMOID—BILATERAL EXOPHTHALMOS—GROWTH IN THE NASO-PHARYNX AND MAXILLARY SINUS.

By CHARLES STEDMAN BULL, A.M., M.D.,
OF NEW YORK.

R. M., æt. thirty-eight, first seen January 12, 1880. The patient was a tall, robust man, who said that the first symptom of any trouble had been a protrusion of the right eye five years before, and that about five months later the left eye also began to protrude; and the exophthalmos slowly increased without there having been at any time any pain.

There was no other symptom until a year ago, when vision began to fail in both eyes, and has steadily grown worse. During about the same period, also, he noticed that his breathing became somewhat difficult, especially when his mouth was closed; and for the last two months he had not been able to breathe through his nose at all. There have been no head symptoms at any time. An examination demonstrated that the exophthalmos was directly forward in the horizontal plane, and the eyes resisted pressure backwards somewhat firmly, and the movements of the eyes were somewhat limited in all directions. The lids could be closed over the eyes with some little effort, but there was no chemosis and no infiltration of the conjunctiva. The media were clear, the pupils normal in size and reaction, the retinal veins in both eyes were engorged, distorted, and pulsating, but there was no change in the optic disks that could be regarded as pathological. Vision in the right eye was $\frac{1}{100}$, and in the left eye, perception of light. There was some slight, ill-defined limitation of the field in the right eye. The urine was examined, but nothing abnormal was found. The heart's action was very rapid, one hundred beats to the minute, and there was a slight obstructive murmur at the base with the first sound. On February 23, vision had sunk in the right eye to $\frac{1}{100}$, the temporal halves of both disks were distinctly discolored, having assumed a white hue; the exophthalmos was more marked, and the eyes now slightly diverged. When direct pressure was made upon the eyes backwards, there was considerable pain produced in the orbits, and the resistance was very firm. The movements of the eyes were markedly limited in all directions. At this visit a very thorough examination was made of the maxillary sinuses and naso-pharyngeal space. The floor of both orbits was pushed upward as if by a growth within the antrum, this being more marked in the left orbit. The posterior nares were blocked by a growth extending entirely across the openings, and separating the nares from the pharynx. This growth could be felt at the vault of the pharynx, and apparently involved also the region near the pharyngeal orifice of the right Eustachian tube. It was hard, had a slightly lobulated surface, was sensitive on pressure, and bled somewhat easily. The right anterior naris was filled by a growth which came forward nearly to the orifice, and appeared to extend from the external wall of the lower and middle meatus. It pushed the septum and turbinated bone over to the left side, but, by slow and careful manipulation, a small probe could be passed along the floor of the nose until it struck the posterior nasal growth. The neoplasm in the nose was soft and very vascular, and a portion of it was removed for examination. It was the opinion of the writer that the case was one of malignant growth of the bones of the face and orbit, probably of the class of osteo-sarcoma, and probably proceeding from the periosteum of the sphenoid and ethmoid bones, and involving the superior maxillary and turbinated bones. The growth filled both maxillary sinuses, all the three meatus of the nose on the right side, and, probably, the superior meatus on the left side. The lower meatus on the left side

was obliterated by the septum being pushed against the outer wall. It was the opinion of Dr. Henry B. Sands, who kindly saw the case for me, that the growth in the nares proceeded from the one in the antrum rather than by direct prolongation from the posterior nares. He thought that the neoplasm occupied not only most of the deep cavities and sinuses in the bones of the face, but also all of the communicating cellular spaces of the cranial and facial bones; and this was undoubtedly correct. The rapidity of such a growth is very much increased in bony tissue, after it has reached the cellular spaces of such bones as the sphenoid and ethmoid. It is not at all improbable that the growth in this case extended into the frontal sinuses from the superior nasal meatus, as the progress had been very rapid in the six weeks that intervened between the two visits, and of late the patient had complained of constant frontal headache. The portion of the growth removed from the nose for examination proved to be of a mixed character. Its tissue was largely myxomatous, but there were large numbers of fusiform cells, and quite a number of giant cells, or myeloplaxes, while the development of bloodvessels was enormous. The case was not deemed a fit one for operative interference, and this decision was communicated to the patient, who was discharged, and has not since been heard of.

These cases of primary osteo-sarcoma of the bones at the base of the skull are comparatively rare. The chief danger lies in the prolongation of the tumor into the intra-cranial cavity, which may occur in various ways, either from the orbital cavity backward along the optic nerve through the optic foramen; or by destruction of the bones by carious otitis, leading to meningitis and encephalitis; or by dissemination of the morbid growth itself through minute bony channels. Osteo-sarcomata which begin in the cavity of the skull, in the ethmoid cells, in the naso-pharynx, in the sphenopalatine fossa, or in the frontal or maxillary sinus, all tend to involve the orbital walls, and eventually to extend into the orbital cavity itself. In this latter stage, care must be taken to avoid confounding these cases with those of primary orbital tumors, in which the prognosis is by no means so grave, while they also admit of successive operative removal. In the class of tumors represented by the above detailed case, the participation of the orbital walls is only one phase of the widely extended disease of other cranial bones. It is doubtful if the primary growth ever begins in the orbital walls themselves. The wide extent of the disease, its malignant character and often rapid growth, are strong counter-indications against any operative measures. This decision is strengthened by the results, proximate and remote, of such operations as have been undertaken. In almost all instances, the growth has been found to involve the bones of the face and base of the skull beyond the limits of the operator's knife, and the operation has only increased the rapidity of the growth. In similar desperate cases where the superior maxilla has been exsected, in whole or in part, the patient has died within a short period, either from shock or from secondary hæmorrhage; and in the opinion of

the writer, all such operations in cases of this class are strongly to be deprecated.

✓ A CASE OF MORPHIA POISONING

TREATED SUCCESSFULLY BY LARGE DOSES OF ATROPIA.

By J. H. SMITH, M.D.,
OF DALLAS, TEXAS.

I was called at three o'clock on the morning of February 17, to see E. M., a variety actress, who had taken fifty cents worth of sulphate of morphia. I did not see her until two hours after she had taken the drug, and upon my arrival I found her in a state of profound insensibility; breathing, stertorous; pulse, slow and feeble; pupils, insensible to the action of light, and contracted to a pin-point in size. I succeeded in slightly arousing her, and managed to partially empty her stomach by emetics; but she again became insensible, and I, not knowing how many grains of morphia she had taken, concluded to give her the benefit of sulphate of atropia hypodermically. Having lost a similar case last summer, in which I was satisfied afterwards that I did not use the atropia in sufficiently large doses, I determined to give it heroically. I was satisfied it was my only main hope, so I commenced with one-twelfth-grain doses. I gave the first immediately after my arrival; the second in half an hour; and the third, fourth, and fifth (I only gave five doses) at intervals up to ten o'clock A.M. I had very little hope of saving her; but, by working all day, using flagellations, severe shakings, and hot applications to the feet and limbs, she began to show signs of returning life at about five o'clock P.M.; and at seven P.M., I considered her out of danger. I would here state that her respirations became as slow as barely two per minute at times, but never going beyond eight until she began to recover. I report this case merely to show the large doses of sulphate of atropia used, the total amount being $\frac{5}{12}$, or nearly one-half of a grain. I learned afterwards that fifty cents would purchase fifteen or twenty grains of sulphate of morphia. I do not know the exact amount of atropia required to counteract a given amount of opium, but I am inclined to believe that our only guide in the use of atropia in opium-poisoning is to watch its physiological effects. The patient made a good recovery from the effects of the opium, and is well now, with the exception of a burn on the right foot from a hot hand-iron, which, in the natural excitement of the moment, was allowed too close contact with her foot, producing a burn of the third degree, and for which I am now treating her.

REPORT OF A CASE OF LITHOTRITY, WITH SUBSEQUENT LITHOTOMY, FOLLOWED BY IMMEDIATE UNION THROUGHOUT THE ENTIRE INCISION.

By A. W. MCCOY, M.D.,
OF PHILADELPHIA.

DURING the latter part of October, 1881, there came under my care William A. McE., æt. twenty-one, native of this city, who had been a great sufferer from vesical irritation, for a long period.

During his childhood he had incontinence of urine at night, which continued for several years. At the age of thirteen he passed a small calculus, which became arrested at the meatus, and was removed by the family physician. The stone was of dark-brown color, smooth surface, and about the size of a cherry-stone.

Since that time his health has been good. He had no symptoms of vesical irritation until three years ago, when he began to have pain (which was only momentary, however,) at the end of his penis after the act of urination. This condition continued, with slowly increasing pain after passing water, until in July, 1881, when his distress greatly increased, not only after urinating, but also upon exercising. His suffering increased throughout the summer, and, at the time he came under my care, he was scarcely able to be out of bed. On my second visit, his bladder was sounded for stone with a Thompson searcher, and a calculus readily felt. A few days subsequently, the diagnosis was confirmed by Dr. D. Hayes Agnew.

The following week lithotripsy was performed by Dr. Agnew, and a portion of the stone successfully crushed. It proved to be very hard (as was surmised by a previous examination of the urine). Although all the force justifiable was used, the remaining portion could not be crushed. The operation caused no disturbance, and the fragments were passed from the viscus with but little discomfort. Two weeks after the crushing, lateral lithotomy was performed successfully by Dr. Agnew.

A very jagged, dark-brown oxalate-of-lime calculus, weighing one hundred and twenty-two grains, was removed. The stone had been broken in half at the crushing operation. The portion removed was the remaining half. The bladder was well washed out, and the patient put to bed. Five hours after the operation there was considerable traumatic fever, and some little pain in the bladder was complained of. Fourteen hours after the operation urine was passed through the urethra, none escaping through the wound at this nor any subsequent time during the entire convalescence. The fever gradually subsided, and in a few days the pulse was normal.

The wound became completely agglutinated after the operation, and showed no swelling or redness at any time, and on the fourth day appeared entirely healed. The condition of the patient seemed to be normal, with the exception of a slight pain felt on evacuating the bladder. He passed his urine in a full-sized stream with good force, and retained it easily from six to eight hours.

On the ninth day urine was voided without pain. About this time his right epididymis became tender and swollen, and involved the testis. This complication readily yielded to treatment and gave but little trouble.

From this time on the subject did well, although kept in bed three weeks, as a precautionary measure against accident. So far as the operation and wound were concerned, he might have been released much earlier.

Few cases are on record of union by first inten-

tion¹ in operations for stone, so rare is it, that it has become the rule among surgeons not to expect or make special effort to obtain such a result. It is probable that with more attention to possibilities of such success, in cases of lithotomy, this result might more frequently become the experience of surgeons.

HOSPITAL NOTES.

MONTREAL GENERAL HOSPITAL.

(Service of PROF. RODDICK.)

TWO CASES OF PEMPHIGUS TREATED WITH ARSENIC.

(Reported by MR. B. W. BURLAND and CLARENDON RUTHERFORD, M.A.)

CASE I.—J. C., æt. thirty-one, a stout, well-nourished Englishman, butcher on board a steamship, was admitted to hospital, November 9, 1881, with acute general pemphigus. Has been a healthy man; has had gonorrhœa, but never syphilis. About three months ago was pricked with a fish-bone in the index finger of the right hand, and this remained sore, painful, and discharged at times until three weeks ago. Present attack began November 4, when the patient noticed, on awaking, soreness of the eyelids, and a pimple on the bridge of the nose. In the evening there were additional pimples about the *alæ nasi*, and the lips became red and sore. The next morning there was a free discharge from the lids, blebs had formed on the pimples, and they had extended to the neck and scalp.

On admission, four days after the onset, he was weak, temperature 104°, pulse 110. There were bullæ on forehead, neck, chest, back, and extremities; the average size about that of a quarter of a dollar; many had ruptured and others presented excoriated patches; many of those on the lower extremities were hæmorrhagic. The eruption covered the greater part of the back; they were numerous on the scalp, and the hair was much matted with the secretion. Conjunctivæ were inflamed, joints of fingers presented purulent blebs, and the palms of the hands were erythematous. A few vesicles were seen on the inside of the lips and on the tongue. For the first week the eruption increased and the general condition became aggravated. He was placed on a water bed, and had stimulants and iron freely administered. The temperature range was from 101° to 103°, pulse a little over 100. Urine about 40 ozs.; contained sugar; no albumen. On the 16th he was ordered Fowler's solution \mathfrak{m} . v. three times a day. From this date no new spots came out and the man began to recover. The note on the 22d, reads: "Patient improving rapidly and is gaining strength; eyes still sore, but looking better; desquamation taking place on arms and hands; temperature nearly normal; only a few bullæ remain on legs and feet—no new ones."

On 29th, patient got up. No blebs remained, and only a few patches of excoriation on neck and joints. Has diarrhœa and abdominal pain. Arsenic was discontinued to-day. He rapidly gained strength, and on December 13, left the hospital healed with the exception of a scaly condition of the elbows.

CASE II.—T. K., æt. sixty-two, an Englishman, admitted December 27. Had enjoyed good health up to six or seven months before admission, when he began to run down from lack of proper nourishment. Has had gonorrhœa, which was followed by rheumatism (gonorrhœal), and ankylosis of both wrists. No history of syphilis. Has been a hard drinker, and has been much troubled with piles. Present illness began six months

¹ Dudley, of Kentucky, 8 cases in 135 operations; Crichton, of Scotland, 23 cases in 200 operations. (*Vide* Gross on Urinary Organs, 3d ed., p. 275.)

ago in the form of erythematous patches on the flexor surfaces of the arms, which were followed by blebs, varying in size from a split pea to a dime-piece. The thighs then became affected, and later the anterior region of the body and the shoulders. On admission the eruption was chiefly on the lower extremities; the bullæ were large, surrounded by indistinct areolæ, and filled with fluid, which was clear at first, then opaque, and finally yellow. Considerable itching and even pain preceded the eruption of new patches; urine normal. During the first fortnight after admission, several relapses occurred, chiefly on the legs. On January 15, the patient was ordered m. v. of Fowler's solution of arsenic three times a day with generous diet. The dose of the arsenic was gradually increased to m. x. ; a further increase caused gastric irritation, and the drug was discontinued for a few days. Locally, a weak solution of tannin was applied. The effect of the treatment has been most decided; relapses are now (March 1) very infrequent, and in place of large, well-filled bullæ, the eruption has an aborted look. For five or six days no new bullæ have appeared. The general condition of the patient has greatly improved. He continues to take m. v. of Fowler's solution three times a day.

Remarks.—The first of these cases of pemphigus is more than usually interesting on account of the very acute symptoms by which it was ushered in. For a time it seemed as if there might be some serious blood contamination. With regard to the wound in the finger—was it concerned in the causation of the disease? Both cases afford excellent illustrations of the marvellous effects of arsenic in many cases of pemphigus. In the acute case the disease seemed to be staggered by the first dose of the solution, and not the faintest attempt at relapse was made. In the second case the effects of the drug have not been so marked, but they have been decided.

MEDICAL PROGRESS.

SOLUTIONS OF ALKALOIDS IN OIL AND GLYCERINE.—At a recent meeting of the Société de Thérapeutique (*Gaz. Hebdom. de Méd.*, Jan. 6, 1882), M. VIGIER pointed out the difference which exists, in a therapeutic point of view, between solutions of alkaloids in oil and in glycerine. It is true that the alkaloids dissolve more readily in glycerine; but as scarcely any of this substance is absorbed by the skin, the preparation obtained is inert. On the contrary, oils dissolve alkaloids by means of the oleic acid in smaller quantity; but, the cutaneous absorption being more considerable, they yield much more manifest results.—*London Med. Record*, Feb., 1882.

THE ANTAGONISM BETWEEN AMYL-NITRITE AND CHLOROFORM.—In this paper Dr. TESTA (*Gaz. Med. Ital.*, Oct. 29 and Nov. 5, 1881), gives the results of forty-four carefully conducted experiments on the action of amyl-nitrite in presence of chloroform in animals. The subjects of the experiments were rabbits, and the experiments themselves are divided into four series of eleven each. In the first series the action of chloroform alone is studied; in the second, the influence on the anæsthetic condition of amyl-nitrite; in the third, the influences of varying doses of chloroform; in the fourth, the influence of the amyl-nitrite on arterial pressure. From these experiments, Dr. Testa concludes that the action of amyl-nitrite is to lower arterial tension, to increase the heart-beats, and to render respiration irregular. He believes that its action in chloroform poisoning is not only useless, but positively pernicious, inasmuch as it intensifies the very risks to which chloroform itself is liable. There is, therefore, no true antago-

nistic or antidotal action between the two substances.—*London Med. Record*, Feb., 1882.

A MODIFICATION OF PETTENKOFER'S REACTION FOR BILE ACIDS.—Prof. DRECHSEL, of Leipsig, recommends the use of syrupy phosphoric acid, instead of sulphuric acid. Enough phosphoric acid is added to the solution of bile acids, which should be as concentrated as possible, to render the mixture somewhat syrupy, then a little cane sugar is added, and the test-tube warmed by immersion in boiling water. After a short time a beautiful red or violet-purple appears. The advantage of phosphoric acid over sulphuric exists in the fact that the former does not char the cane sugar, so no brown coloration is formed to interfere with the reaction; it also chars to a less extent any other organic impurities which may happen to be present.—*Centralb. f. d. Med. Wissen*, Feb. 25, 1882.

EFFECT OF DRUGS ON THE SECRETION OF MILK.—Dr. MAX STUMPF draws the following conclusions from an elaborate experimental study of the action of drugs on the mammary secretions:

1. Iodide of potassium produces a decided reduction in the quantity of milk secreted.
2. Morphia, alcohol, and lead do not affect the quantity or quality of milk.
3. Salicylic acid appears to increase somewhat the secretion of milk in quantity and in the proportion of sugar.
4. Pilocarpine does not increase milk formation.
5. Iodide of potassium causes an alteration in the functional activity of the gland, and, consequently, a modification in the composition of the milk.
6. Alcohol and alcoholic drinks increase only the relative amount of fat in the milk, and can, therefore, not be used as a diætic means of stimulating the gland.
7. Iodine rapidly appears in the milk, and disappears in the woman immediately after stopping the drug; in the herbivora it lasts some time after the cessation of administration of iodine. The quantity of iodine in the milk follows no definite proportion to the amount of the drug administered, but appears to vary according to individual peculiarities; "iodized" milk, therefore, cannot be used as a therapeutic means. Iodine does not exist in the milk as iodide of potassium in solution, but is united with the caseine.
8. Alcohol does not pass into the milk in the herbivora.
9. Lead passes in traces when small doses are administered, and persists after the stopping of the drug.
10. Salicylic acid, when given in large doses, can be found in small quantities in the milk, in somewhat larger amounts, however, in woman than in the herbivora.—*Deutsche Archiv f. Klin. Med.*, Jan. 18, 1882.

GANGRENE OF THE NOSE AND UPPER LIP.—The rare occurrence of such cases is shown by the remark of Prof. Billroth, that he had never before seen a similar case, and knew only of few cases having been reported. Contrary to the general experience in cases of gangrene occurring in other situations, as in the ear, the patient present at Billroth's clinic, a man fifty-five years of age, could give no explanation of the cause of the disease. He had had a tertian intermittent years before, and was subject to fainting attacks. After a moderate chill the tip of the nose became black; later, however, the entire nose and part of the upper lip were destroyed, leaving a granulating ulcer. Syphilis naturally suggested itself, but the man denied ever having been infected, and is the father of four healthy children. Prof. Billroth will attempt to replace the nose and lip by a plastic operation.—*Allgemeine Wiener Med. Zeit.*, Feb. 21, 1882.

VAGINAL OVARIOTOMY.—In the March number of the *New York Medical Journal and Obstetrical Review*, Dr. W. H. BAKER, Instructor in Gynecology in Harvard University, relates a case in which he removed a suppurating dermoid cyst of the ovary *per vaginam*, and remarks that the success which now attends ovariectomy by abdominal incision renders the cases very few in which removal by the vagina would be the better method. He would limit it: First, to cases where the cysts are small and their contents bland, so that removal can be effected without difficulty, and without great danger of septic peritonitis from the escape of any of the fluid into the peritoneal cavity. Second, to dermoid cysts so small as to be removed through the vaginal incision without evacuation. In the case of an ovarian cyst firmly adherent in the pelvis, he believes the best operation to be that of drainage into the vagina, with subsequent destruction by suppuration or by the cautery.

POISONING BY CHLORATE OF POTASSIUM.—LUDWIG (*Journ. de Pharm. et de Chimie.*, Sept., 1881), having investigated a case of poisoning by this salt, has arrived at the following conclusions: Potassium chlorate appears to act, on the one hand, like phosphorus and arsenic; it is reduced by the blood to the state of potassium chloride, for it can be detected neither in the blood nor in the urine, nor even in the gastric contents; the red corpuscles are destroyed, and other toxic symptoms are developed. On the other hand, the chlorate is decomposed in the kidneys by feebly acid urine into a base and an acid, and the chloric acid thus formed acts in an energetic manner. This singular alleged fact is in opposition to the received views of chemists.—*London Med. Record*, Feb., 1882.

HYPODERMIC USE OF CAFFEINE.—At a recent meet-
ing of the Société de Thérapeutique in Paris (*Gaz. Hebdom. de Méd.*, Jan. 6, 1882), M. TANRET read a paper on this subject. He said that pure caffeine requires ninety-three times its weight of water for complete solution; therefore, up to the present time, it has not been generally employed in subcutaneous injections, one cubic centimetre of the liquid only containing little more than one centigramme of the active principle. The majority of the salts of caffeine proposed with this object, the acetate, valerianate, and lactate, become decomposed, in the presence of water, into free acid and caffeine, which is precipitated in consequence of its low degree of solubility. The salts containing mineral acids, sulphate, hydrochlorate, and hydrobromate, have little stability, and do not offer any advantage. M. Tanret has endeavored to obtain a salt of caffeine by means of the chlorogenic acid which is associated with it in coffee, as Payen has demonstrated; unfortunately, the preparation of this salt is difficult and laborious. Since then, he has had recourse to similar acids, such as benzoic, cinnamic, and salicylic. He has thus been able to obtain double salts of caffeine and soda, having the advantage of being soluble in somewhat larger proportions, and having a constant composition. With double benzoate of caffeine and soda, a solution is prepared, containing twenty centigrammes of alkaloid in a cubic centimetre; the solution of double salicylate contains from twenty-five to thirty centigrammes to the cubic centimetre. The solutions of benzoate and salicylate are generally alkaline, and are neutralized by means of the corresponding acid. These salts, however, have no great stability, for they decompose when the solution is treated with chloroform; and the caffeine, less soluble than the salt itself, is precipitated. M. Vigier believed that in consequence of an analogous decomposition of salts of narcotine contained in opium; that, by means of chloroform, ether, or turpentine, the so-called free narcotine is obtained. It differs in no respect from the so-called combined narcotine, which is similarly ex-

tracted from raw opium during the preparation of morphia. M. Dujardin-Beaumetz had used double benzoate of soda and caffeine in two cases, one of diphtheria, and the other of choleraic symptoms. He did not find any irritating local action from the solution prepared by M. Tanret for hypodermic injections; but, as to the therapeutic value of the drug, he could not yet form an opinion. M. Féréol asked whether the double salts of caffeine, proposed by M. Tanret, could not be administered by the mouth. M. Tanret replied that he had no other object in preparing so concentrated a solution of caffeine but for subcutaneous injections, but the double salts which he had obtained might be given as a draught. It would be enough to prescribe the dose of caffeine required, and to add to it a sufficient quantity of benzoate or salicylate of soda to obtain the complete solution of the alkaloid. An extemporaneous preparation of the double salt, containing a known dose of caffeine, might thus be easily obtained.—*London Med. Record*, Feb., 1882.

CURABILITY OF LOCOMOTOR ATAXIA.—SCHULTZE (*Arch. f. Psych.*, xii., 1,) had the opportunity of making an autopsy on a patient reported as approximately cured of tabes dorsalis by Erb, in *Ziemssen's Cyclopadia*. This patient had had latency of all symptoms except the patellar reflex destruction, and occasional enuresis, over twelve years, and died by corrosive poisoning. Characteristic posterior spinal sclerosis was found in the following distribution: lumbar region, diffuse degeneration of moderate intensity of posterior columns; dorsal region, degeneration of most external segment (root-zones) of Burdach's columns, partial degeneration of Goll's columns; cervical region, less intense, but more diffuse degeneration of Burdach's columns, and slight involvement of the columns of Goll; pyelitis and cystitis were the only other noteworthy lesions. In conclusion, the author polemicalizes very properly against the nerve-stretching therapeutics, and suggests as a more legitimate field for the surgical neuro-therapist—it is difficult to say whether satirically or otherwise—stretching the optic nerve.—*Amer. Journ. of Neur. and Psy.*, Feb., 1882.

EPIDEMIC OF ECTHYMA IN A SMALL-POX WARD.—M. DU CASTEL (*Journ. de Méd. et de Chirg. Prat.*, December, 1881) observed this complication in the patients in the small-pox wards under his care at the Saint Antony Hospital. The ecthyma supervened either during the stage of desiccation or even that of suppuration. The ecthymatic eruption, sometimes discrete, sometimes confluent, chiefly occupied the anterior surface of the chest and the upper or lower limbs. It was also seen on the face; generally it showed itself in successive eruptions, sometimes preserving a mild character, sometimes, on the contrary, terminating in death. For a long time the men of the ward only showed numerous cases of ecthyma, but a majority of the convalescents were attacked by it. It was only after several months that the disease broke out in the women's ward, where it broke out with the same intensity. Before acknowledging its contagious nature, M. Du Castel waited for the development of the disease in other wards; but the isolation of the small-pox patients scarcely allowed contact with other wards. Nevertheless, the house-surgeon of the ward and a male nurse were attacked by ecthyma, localized in the one in the hand, and in the other in the feet, and probably produced by direct contact with the patients. His own and M. Vidal's experience has well demonstrated that ecthyma is inoculable. But it may be said in connection with inoculable ecthyma, that there is no doubt ecthyma may be contagious and epidemic; this variety would be so much the more important to recognize, because, when it finds a

soil appropriate for its implanting, such as convalescent small-pox patients, it may become a serious and even mortal affection. The local treatment consisted in lotions of carbolic oil on the face, and lotions of mercurial sublimate over the rest of the body.—*London Med. Record*, Feb., 1882.

A SIMPLE TEST FOR ALKALOIDS IN THE URINE.—A very simple test for determining the presence of any vegetable alkaloid in the urine, which has been given therapeutically, is one originating with Prof. Bouchardat, of Paris. It consists in dissolving *one part* of iodine and *one part* of iodide of potassium in *fifty parts* of distilled water. When this solution is added to urine which contains sulphate of quinia or other vegetable alkaloid it forms a chestnut-colored precipitate.—*Pacific Med. and Sur. Journ.*, Feb., 1882.

ACTION OF THE MYDRIATICS.—The comparative effect of duboisine and homatropine on the eye have been investigated by SCHÄFFER (*Archiv für Ophthal.*, vol. x., p. 196; *Gaz. Hebdomadaire*, January 13, 1882, p. 28). In man, the effect on the pupil of atropine locally applied was to cause mydriasis in fourteen or fifteen minutes, persisting to the fourth day. Duboisine produced dilatation in six or eight minutes, lasting about four days. Homatropine induced dilatation in nine minutes, but it lasted only three hours. As regards accommodation, this was influenced more rapidly (in ten minutes) with duboisine than with atropine (twenty-three minutes). The maximum of intensity was reached in an hour and a half after dilatation by duboisine, and in the same time with homatropine. It disappeared, however, more quickly with homatropine than with the other two alkaloids. Therapeutically, where a temporary effect only is required, homatropine may prove more serviceable than atropine or duboisine.—*London Med. Record*, Feb., 1882.

IODOFORM INSUFFLATIONS IN LARYNGEAL PHTHISIS.—BEETZ (*Berl. Klin. Woch.*, No. 2, 1882) gives details as to his method of applying this remedy. Iodoform, finely powdered by rubbing up with ether, may be applied to the larynx by insufflation with so little irritation that the morphia at first added can very quickly be omitted. The amount used, 30 grains daily, in three or four applications, is not enough to cause toxic symptoms. To prevent, as far as possible, annoyance from the odor of the remedy, an inhalation of carbolic acid solution may be given before the insufflation; a proceeding which will also allow the more direct application of the remedy to the ulcerated surface, although Dr. Beetz has found the iodoform alone to succeed admirably.—*London Med. Record*, Feb., 1882.

CEREBRO-SPINAL MENINGITIS, FOLLOWED BY DISTURBANCES OF HEARING AND EQUILIBRIUM.—From an interesting review of this question by MOOS, we learn that of sixty-four cases of recovery from cerebro-spinal meningitis, which showed disturbance of hearing as a sequel, exactly one-half manifested, in addition, a more or less disordered equilibrium. Of the thirty-two cases exhibiting the latter symptom, twenty-nine were totally deaf on both sides, two totally deaf on one, and hard of hearing on the other side, and one case had merely impaired hearing bilaterally. The disturbance of locomotion had existed for periods varying from three weeks to five years after the inception of the disease, and was chiefly characterized by a staggering gait, which in children approximated the waddle of a duck. The remarkable feature was that the disorder disappeared if the patients (usually children) were well supported, and that its intensity was greatest in those children who had not practised walking long before

being attacked by the febrile affection. After an ingenious process of argumentation, the following conclusions are formulated: 1, the centre for the sense of the equilibrium is in the cerebellum; 2, the nerve-end apparatus in the ampullar crista, and, perhaps, of the sacculus, is in combination with this centre by means of nervous channels; 3, disease or irritation of the end-apparatus or of the neighboring structures is competent to produce the same symptoms as disease or irritation of the centre itself: this applies particularly to the symptom of vertigo; 4, unilateral labyrinthine affections, no matter whether they have primarily originated in the labyrinth or have extended thither from the skull-cavity, may manifest themselves by vertigo; 5, should the opposite labyrinth become involved in the same patient, this complication is also inaugurated by a (fresh) vertigo, soon to be followed by staggering gait; 6, sudden unilateral paralysis of the ampullary nerves does not produce vertigo, etc.; 7, the same, as a rule, applies to destruction of the nervous end-apparatus of the vestibular system, following chronic disease-processes; 8, bilateral, acutely produced hæmorrhagic or suppurative inflammation of the nerve end-apparatus of the ampullæ, with permanent paralysis, especially when following cerebro-spinal meningitis, causes staggering gait, whose severity is proportionate to the youth of the patient, and which is most intense and of longest duration when visual disturbance co-exists. As soon as the muscular and visual senses are sufficiently practised, they vicariate, and the staggering gait disappears.—*Amer. Journ. of Neur. and Psy.*, Feb., 1882.

THE ACTION AND USES OF ASPIDOSPERMINE.—DR. GUTMANN records (*Archiv für Experim. Pathol. und Pharmacol.*, Heft vi., p. 451) experiments with several preparations of this substance, the alkaloid of white quebracho bark. Four of these preparations were citrates, the fifth was the simple alkaloid. In frogs, the subcutaneous injection of 1-30th grain of the alkaloid caused distinct loss of voluntary power in the extremities, especially the posterior, going on to complete paralysis. The reflex action was less affected. To ascertain whether the effect was produced through the intramuscular terminations of the motor nerves, through the muscles, or through the central system, the common iliac artery and vein were tied; when it was found that the paralysis still followed, while also it was shown that muscular contractility was not diminished to direct faradic stimulation. The respiration was much retarded, probably the result of direct action on the respiratory centre, and ceased when paralysis was complete. The pulse sank from 38 to 15 in the half minute, a reduction which, it was shown by control experiments, was not due to the operation requisite for laying bare the heart. This result taking place in previously curarized frogs, Dr. Gutmann considers due, not to the action of the vagus, but to paralysis of the automatic cardiac ganglia. In rabbits, the respiration was not primarily affected, but the action on the heart was constant and characteristic, the pulsations sinking from 70 to 55 or 50 in the half minute. The temperature also fell, within an hour, 2° to 2.7° Cent. (3.6° to 4.8° Fahr.). Section of the vagi caused no increase in the frequency of the heart's beat. Sensation and motion were unaffected till death was near. Dr. Gutmann would, therefore, recommend aspidospermene in cases of cardiac neuroses and as an antipyretic, for which last purpose cortex quebracho is used by the physicians of the Argentine Republic, where it is native. Dr. Gutmann calculates the minimum dose for an adult man as 18 grains. In a case of hemiepilepsy, by means of it he reduced the pulse from 80 to 60 per minute.—*London Med. Record*, Feb., 1882.

ACTION OF HYOSCINE.—Following up his experiments on the action of hyoscyamine, Dr. GNAUCK has sought to determine the action of hyoscine, one of the elements of hyoscyamine (*Centralb. für die Med. Wissen.*, No. 45, 1881). His experiments were mainly performed on healthy individuals and on patients affected with nervous diseases. Commencing with small doses of iodide of hyoscine in healthy individuals, he found that hyoscine is tenfold stronger in its effects than hyoscyamine, approaching thus more nearly to atropine. The effects observed were cerebral oppression, vertigo, glimmering before the eyes, feeling of intoxication, thirst, nausea, acid taste, itching of skin and a feeling of heat, labored and retarded respiration, reddening of the face, dilatation of the pupils, unsteadiness of gait and delirium—that is, the same symptoms as those from atropine and hyoscyamine, also exhaustion and sleep, as with hyoscyamine. In addition, however, there was also a retardation of the pulse even with large doses—a result not seen with atropine and hyoscyamine. This last symptom varied with the amount of the dose and the susceptibility of the individual. Even a very minute dose (1-600 grain) of hyoscine invariably produces some of its effects, and subcutaneously twice as powerfully as by the mouth. The interval elapsing is usually from two to twelve minutes, or slightly longer by the mouth, and the effect is very various in different individuals. The fall in the pulse is the first symptom to appear, the last to disappear, ranging from eight to twenty beats. A slight reduction of the pulse appears in the beginning of the action of atropine and hyoscyamine, and with small doses; but this is quickly followed by paralysis of the terminal filaments of the vagus. Hyoscine probably causes the fall in the pulse by an irritation of these filaments; tropaic acid, the other element in hyoscyamine, therefore, having the power to alter its action. Dr. Gnauck promises to detail, at a future time, the results of experiments on patients affected with mental diseases.—*London Med. Record*, Feb., 1882.

CARBOLIC ACID POISONING.—Dr. ARCHER reports a case of poisoning with a wine-glassful of crude carbolie acid in a woman forty years of age, from which he draws some important conclusions. The treatment mainly consisted of large draughts of olive oil, and in hypodermic injection of forty minims of ether, recovery taking place. He concludes:

1. That the nervous centres are profoundly affected shortly after the reception of the poison into the stomach.
2. That a large dose of the poison, when concentrated, may be protective as regards the final result, by rendering the mucous membrane of the stomach non-absorbent.
3. That a moderate dose, considerably diluted, may prove fatal, the gastric mucous membrane retaining its absorptive powers.
4. That when the dose is concentrated, the introduction of stimulants into the stomach is not likely to be of any use, but stimulants used subcutaneously may prove beneficial in bringing about reaction.
5. That no permanent injury follows as a necessary consequence from a concentrated dose.—*Liverpool Med. Chir. Journ.*, Jan., 1882.

A similar case is reported by Dr. CORNICK of a man who took two or three drachms of carbolie acid with suicidal intent. Recovery took place under the administration of saccharated lime-water. Dr. Cornick alludes to the following points as worthy of notice:

1. The rapidity with which the poison overwhelmed the system to complete insensibility, and the production of general muscular spasm, tonic in character, occurring fifteen minutes after the administration of the poison; and
2. The speedy and complete efficacy of the saccharated lime-water as an antidote; nothing else having

been given until the patient was so far recovered as to suggest himself another and a different antidote; and no appreciable quantity of the poison having been removed by vomiting and purging.—*Nashville Journ. of Med. and Surg.*, March, 1882.

TRAUMATIC TETANUS TREATED WITH ESERINE.—Dr. THOMAS LAYTON reports a case of tetanus occurring in a boy, aged eleven years, following, after an interval of three weeks, the wounding of the sole of the foot with a splinter. Chloral, bromide of potassium, and cannabis indica were employed without benefit. Eserine was then administered in doses of $\frac{1}{8}$ grain every hour. Recovery took place. Dr. Layton calls attention to the following points:

1. The child took a full adult dose of the sulphate of eserine every hour for several days, and not only were there at no time symptoms of poisoning, but the beneficial action of the remedy was apparently manifest.
2. There was never the least contraction of the pupils—on two occasions, as mentioned in the observation, the pupils were dilated, at all other times they responded to light in a normal manner.
3. It was not noticed that the sulphate of eserine increased either the secretion of tears and saliva, or defecation; with regard to the last, an occasional purgative had to be employed during the progress of the case.—*New Orleans Med. Journ.*, March, 1882.

HERNIOTOMY IN SIMULATED HERNIA.—Dr. LODOVICO CORAZZI describes, in the *Gaz. Med. Italiana*, Nov. 12, 1881, the case of a woman, aged sixty-three, who, before coming under his care, had already, for fourteen years, been the subject of an inguinal hernia on the right side. Without any apparent cause, this suddenly exhibited signs of strangulation, which did not decrease even after the hernia had apparently been reduced by taxis. The sac was, therefore, opened; but, even after this, reduction could not be effected. Uncertain whether or not he had reached the intestine, Dr. Corazzi continued his incisions, with the final result of giving exit to a quantity of fluid and gas. These he took to be the contents of the intestine itself, which he supposed he had wounded; and further operative interference was, therefore, desisted from. The necropsy, made a few hours after death, revealed, instead of strangulation, a perforation of the small intestine about two yards above the ileo-cæcal valve. The contents had become extravasated in the abdominal cavity. Thus, what was supposed during the operation to be intestine, was really the sac; the fluid and the gas it contained were derived, the one from a peritoneal exudation, the other from the intestine itself, which had ruptured much higher up at the seat of an ulcer. A correct diagnosis in such a case was almost an impossibility. There would really seem to have been no strangulation whatever; all the patient's symptoms having been directly due to perforation and consequent peritonitis. The simultaneous existence of a hernia was merely an accident, which, however, from its nature, was calculated to induce an error of diagnosis.—*London Med. Record*, Feb., 1882.

TREATMENT OF RUPTURE OF THE BLADDER AND URETHRA BY EXTERNAL URETHROTOMY.—The patient, whose case is reported by Dr. SACERDOTI in the *Gaz. Med. Italiana Prov. Venete*, Nov. 19, was a boy aged thirteen, who fell across a beam of wood, striking, in the first instance, his perineum. When seen, the objective symptoms were great discoloration over the inguinal, scrotal, and perineal regions, a wound on the inner and upper portion of the left thigh, and a globular tumor in the suprapubic region. No urine could be passed, though the desire to do so was very great. On pressing the tumor, urine could be made to flow out of the wound

in the thigh; but following up the track most carefully, the author could not, nevertheless, reach the bladder, nor could he enter it *per urethram*. Taking these and other symptoms into consideration, he believed he was in presence of a case of ruptured urethra and bladder, with extensive extravasation of urine. He, therefore, performed external urethrotomy, introducing, on the second day, a catheter to draw off the urine as secreted. On the eighth day, an abscess opened at the seat of the wound in the thigh, but gradually all adverse symptoms disappeared, and two months after the operation the urethral fistula had healed, and the patient was discharged completely cured. Antiseptic treatment was adopted throughout.—*London Med. Record*, Feb., 1882.

PHYSIOLOGY OF DEGLUTITION.—KRONECKER and MELTZER have arrived at the following results in regard to the act of deglutition. In normal swallowing the mass is injected through the œsophagus into the stomach before peristalsis can be of value.

1. Every act of swallowing excites not only the corresponding contraction of the œsophagus, but inhibits at the same time the previously called-out but not yet manifest contraction of a previous act of deglutition.
2. The second motor irritation is active when the first ensuing movement is over.
3. When the whole glosso-pharyngeal nerve is excited, then no act of deglutition ensues. This is seen in dogs, not in rabbits.
4. When the pharyngeal branch of the glosso-pharyngeal is separately excited, then the inhibition takes place in the throat and chest part of the œsophagus. This result is obtained by experiments on dogs.
5. When the glosso-pharyngeal nerve is divided, then the œsophagus falls into a tonic cramp which can last more than a day. It is not difficult in rabbits to show the inhibitory action of the glosso-pharyngeus upon the taking place of the act of deglutition. When the superior laryngeal nerves are irritated electrically a swallowing movement is called out, and about one second after this, the elevation of the larynx ensues, and on the bared cervical part of the œsophagus a contraction takes place. If now, immediately after the elevation of the larynx, which indicates the first part of the act, the glosso-pharyngei are tetanized for a short period, the contraction of the œsophagus does not take place.—*Journ. of Nervous and Mental Diseases*, Jan., 1882.

A NEW METHOD OF PERFORMING THE CÆSAREAN OPERATION.—Dr. FRANK (*Centralb. f. Gynäk.*, December 10, 1881), thinks we should rather seek to improve the old operation than take refuge in substitutes, such as Porro's. The only advantage of the latter lies in the diminished hæmorrhage; on the whole, the mortality after it is as great as after the Cæsarean section. Drainage is the great desideratum, and a great portion of the article is in praise of Bardenheuer's system of drainage. The procedure is incapable of being carried out, however, in the Cæsarean operation as usually performed. The author's peculiar mode of operating is intended, therefore, to make the uterine wound practically extra-peritoneal. The method consists in opening the uterus low down, and in making a pocket around the incision by bringing the two round ligaments together with sutures of Czerny's silk. A large drainage-tube passes through the lower portion of the abdominal and uterine wounds, and above the tube these two incisions are closed with sutures. The pocket is drained by means of a small tube passed through an opening into the vagina, just in front of the cervix. A third tube lies upon the uterine wound, and extends nearly to the top of the pocket. If the size of the foetus makes it necessary to extend the uterine incision farther upward than usual, or if the round ligaments

cannot be approximated through enough of their length without too much tension, exudation of lymph must be trusted to a certain extent to complete the vault of the pocket. A distended bladder will obliterate it; therefore that organ must be kept empty, and the author describes a special form of catheter that he has devised for the purpose. A case is given in which the Cæsarean operation was performed after this manner upon a woman who was hopelessly burned at full term, and evidently had but a few hours to live. The child was alive, but growing weaker, and its extraction *per vias naturales* was found impracticable. The mother survived the operation ten hours, and at the autopsy not a drop of blood was found in the general peritoneal cavity.—*N. Y. Med. Journ.*, March, 1882.

ACTION OF HYOSCYAMINE.—From an experimental study of the action of hyoscyamine, Dr. J. C. SHAW concludes:

1. Hyoscyamine causes paralysis if taken in sufficient dose; that this loss of motor power is due to paralysis of the motor nerves.
 2. It exercises no visible effect on sensibility.
 3. It has no effect on the muscles.
 4. It decreases reflex excitability, and afterwards increases it; it tetanizes by an action on the spinal cord, acting in this respect like atropine.
 5. In the beginning it causes a rise of pulse and arterial tension, which finally is followed by a fall of both.
- Section of the vagi does not prevent either the preliminary rise of pulse-rate or its subsequent fall.
6. After the use of atropine the changes produced by hyoscyamine in pulse-rate are not in any way characteristic.
 7. Irritations of the vagi reduce the pulse-rate, but it is small compared with what normally takes place, so that it is inferred hyoscyamine partially paralyzes the inhibitory fibres of the vagi.
 8. The increase of pulse-rate is due to a partial paralysis of the inhibitory fibres of the vagi; the fall, to an action on the heart itself.
 9. The rise of arterial tension is due to a stimulation of the monarchical vaso-motor centre; the rise is trifling after section of the medulla between atlas and occiput.
 10. The fall of pressure is due to partial paralysis of the main vaso-motor centre, and probably to an action on the heart itself.—*Journ. of Nervous and Mental Diseases*, Jan., 1882.

EFFECT OF TANNIC ACID ON ALBUMINURIA.—Having, by compression of the renal artery of the rabbit for an hour and a half, induced an artificial albuminuria, Dr. RIBBERT slowly injected into the jugular vein two to three cubic centimetres of a 5 per cent. solution of tannic acid (*Centralb. für die Med. Wissen.*, No. 3, 1882). He then examined the excised kidney, and found that the coagulated fibrin in the Malpighian corpuscles was distinctly less than in those where no tannic acid was used. Finding that this solution of tannic acid frequently caused coagulation of the blood and death, he employed a solution of 2 per cent. tannic acid neutralized with carbonate of soda, and of this he injected 25 cubic centimetres without causing any serious symptom. The albumen was now completely absent in most of the glomeruli, and in the others there was but a very narrow zone. This experimental result supports the use of tannin, as recommended by Prof. Frerichs in nephritis. Dr. Ribbert would recommend the use of tannin and of tannate of soda in larger doses than has been customary; and, more especially, he would advise that they should be used early in the disease, while still, as he holds, confined to the glomeruli.—*London Med. Record*, Feb., 1882.

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ABSORPTION FROM THE BLADDER.

SOME recent experiments of H. MASS and O. PINNER (*Centralb. f. d. Med. Wissen.*, Dec. 17, 1881) call attention to a subject which for a long time has been a disputed question—Is the mucous membrane of the bladder impermeable, or can drugs be absorbed from the vesical cavity? The importance of a decisive answer is evident when we have such an authority as Sir Henry Thompson saying, "in circumstances of great pain you may inject anodynes into the bladder, if you please; but they are of little value. And you need not be afraid of the quantity, for the mucous membrane of the bladder appears to have no absorbing power." This statement is supported by the account of an experiment in which half an ounce of liquor opii was injected into a human bladder, presumably a healthy one, though no note is made of its condition, without producing narcosis. Tilt and Alling, on the other hand, recommend the injection of morphia in cystitis in doses of not less than one grain, while, again, Braxton Hicks says that he has administered as much as eight grains without producing profound narcosis. These results would seem to indicate that the bladder is at least incapable of actively absorbing opium or morphia, while the account of a case of cystitis by Dr. D. C. Black (*British Med. Journ.*, 1869, i., 164), in which the injection of one-fourth of a grain of corrosive sublimate, dissolved in three ounces of water, caused considerable constitutional effect and intense pain, shows that the immunity is not universal. It is probable that the confusion has been introduced from the study of different drugs under different conditions, and to the fact that in many

cases absorption by the urethra, which Alling has shown to be very active, was not properly excluded. Then, again, it is generally held, as was pointed out, we believe, first by Küss, that it is the integrity of the mucous membrane, which is a barrier to absorption, a point which was strongly confirmed by the experiments of Cazeneuve and Livon, who found that when a fresh bladder, filled with urine, was immersed in a vessel of water, dialysis of urea was prevented by the epithelium for thirty hours, while when the bladder was not fresh, or when its epithelium had been destroyed by cantharides, urea could in ten minutes be detected in the water in which the bladder was immersed.

Mass and Pinner experimented on both man and animals, in conditions of both health and disease, and with drugs which could be recognized either by their chemical properties, such as ferrocyanide or salicylate of potassium, by their poisonous effects, such as cyanide of potassium, strychnia, atropia, and curare, or by their physiological action, such as apomorphia and pilocarpine. Different methods of introducing the drug were made use of. In some cases the animal was catheterized, and the drug injected through the catheter, which was then closed and allowed to remain; or the exposed bladder was punctured, the contents withdrawn, and the drug injected, the opening being then ligated. In other cases the substances were injected into the exposed bladder after the introduction of a closed catheter and the ligation of the urethra between the prostatic portion and the neck of the bladder. In all cases glass tubes, inserted into the ureters, served to conduct the urine outwardly, for examination, as fast as it was excreted.

Diseased conditions of the mucous membrane were produced in dogs and rabbits by the injection of dilute solutions of croton oil or oil of turpentine, cantharides being rejected on account of the intense inflammation which it was found to produce. Contrary to what might be supposed, they found very little difference in the absorbing power in animals in the healthy or diseased condition of the bladder, a fact which can only be attributed to some want of analogy in the two conditions compared. The experiments on animals showed that different drugs are absorbed with different degrees of rapidity. Ferrocyanide of potassium and salicylate of sodium are absorbed by the healthy bladder and excreted again, thus showing that although the results of Küss and Sussini are correct, in that a salt of iron, painted on the outside of the bladder, will not show the results of absorption when the epithelium is healthy, examination of the urine coming from the kidney, nevertheless shows the entrance of the potassium salt into the circulation, thus agreeing with the result claimed by Bouchardat.

Cyanide of potassium and strychnia were readily absorbed and produced their toxic action, although more slowly than when given subcutaneously. Atropia was also found to be absorbed by the bladder, but was excreted so rapidly that no constitutional effects were produced, its presence in the urine coming from the kidney, being demonstrated by the dilating power of the latter upon the pupil. This explains Küss's denial of its absorption, who relied on the absence of constitutional effects as proof of its non-entrance into the circulation. Poisoning was not produced by injecting curare into the bladder, as to which point their results do not confirm those of Bernard, although they found that when the bladder filled with curare solution was immersed in a vessel containing water, curare dialysed through the vesical walls. Apomorphia and pilocarpine, on the other hand, they found were absorbed more rapidly than they were excreted, and were, therefore, capable of producing their characteristic effects.

Mass and Pinner's experiments on the human bladder are not as full as could be desired; but, even here, where they are again at variance with Sussini, they found that iodine and pilocarpine, the only drugs examined, were absorbed in 26 out of 41 cases, but slowly and incompletely; while their results with the same drugs in cases of bladder-disease were much more marked, absorption in such cases being very active.

Experiments made by inserting suppositories of iodine, morphia, and pilocarpine into the human urethra, showed that marked absorption occurred; while no evidence was obtained as to the absorption of ferrocyanide of potassium under similar circumstances. No distinction between healthy and diseased urethra is alluded to.

It is to be regretted that their experiments on the human bladder were not carried further; but, as it is, they suffice to show that absorption from the vesical cavity, particularly in disease, is a possibility which must not be lost sight of.

SYPHILIS AND MARRIAGE.

THERE are, perhaps, few directions in which so many grave errors have been committed by intelligent and conscientious physicians as in the management of syphilitics as regards their social and sexual relations. Not very long ago, governed by the belief that in syphilis he was dealing with an indefinitely prolonged and practically incurable disease, the conservative practitioner uniformly cautioned his syphilitic patients against contracting marriage at any time, and warned them of manifold dangers to wife and offspring thereby incurred. Others, less careful or more indulgent, and misled by the then prevalent theory that only the primary lesions were

contagious, urged or permitted matrimony after the first stage of the disease was passed. Both of these courses were fraught with danger. Celibacy, though possibly harmless when voluntary, has never been found to be so when enforced, and many of those to whom connubial happiness was interdicted, sought consolation in forbidden and often destructive pleasures. On the other hand, the syphilitic too often found his marriage-couch a hot-bed of disease, and his children a perpetual reminder of the follies, rather than of the vigor, of his youth.

The unhappy patient thus rarely failed to have the genuine and weighty burden he was called upon to bear increased by the addition of unnecessary penalties, or of avoidable complications, and it can hardly yet be said that these were due to errors of the past. We have, therefore, been glad to observe the interest excited by recent writings on this subject, to which it seems eminently proper to call attention. As usual the truth lies between extremes, and may in this instance be stated as follows:

Syphilitic patients may be permitted to marry, and will, in all probability, be incapable of transmitting the disease to wife or children if no specific symptoms have been observed for a year or eighteen months, and if thorough methodical treatment has been carried out for a period of at least three years subsequent to the primary outbreak. This rule is a safe and almost unvarying guide to both patient and physician, and its observance will resolve all difficulty in the matter of antenuptial counsel.

There are, however, a large number of persons who marry in spite of the existence of active syphilis, and although the physician may deplore or reprobate this action, it is yet his duty to lessen as far as possible its evil consequences, particularly to the innocent mother and her unborn children. In such a situation his course is equally evident, and it will be his duty,

1. To instruct his patient to avoid paternity in every proper manner.
2. To prescribe vigorous and unintermittent specific treatment.
3. In the event of impregnation, immediately to place the mother upon the same treatment, and to continue it throughout pregnancy.
4. To encourage the mother to suckle her own child, and,
5. To avoid unnecessary disclosures to either husband or wife as regards the existence of syphilis in the other.

Many ethical and moral questions arise in connection with this matter, but we have here set forth the general rules which, in our judgment, should be followed in the management of these serious and complicated cases.

THE ANTISEPTIC TREATMENT OF FEVER.

We published, recently, the results obtained by some physicians of the Montpellier School in the treatment of fever by antiseptics, notably by carbolic acid. This practice has been followed in this country with very encouraging results. In Germany, for several years past, a plan of treating typhoid, known as the "specific," has been employed. According to Liebermeister, the mortality under the specific medication by mercury, has been ten per cent., and by iodine, ten to eleven per cent. By the iodine method, the tincture, Lugol's solution, or the compound tincture are given during the whole course, up to the beginning of convalescence. Carbolic acid and tincture of iodine are often prescribed in combination—two of iodine tincture or solution, and one of carbolic acid—forming carbolate of iodine. The mixture, when diffused in water, becomes colorless, and has but little taste. The usual dose is one or two drops every four or six hours. The motive for the administration of these, as also of other antiseptics, may be found in the following considerations: The typhoid germ is, probably, received into the intestinal canal, and may, therefore, be acted on by the antiseptic at the first point of contact. A relation apparently exists between the antiseptic and antipyretic action, for the possession of the former implies the existence of the latter. The vitality of the germ or ferment ceasing, the rise of temperature due to its development is prevented. It cannot be alleged that the antiseptic treatment cuts short the disease, but it appears to render it milder in its course, and to lessen the mortality.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

The College is certainly renewing its youth. On every side the signs of the rejuvenation appear, both actually and prospectively.

On the scientific side of its work, the most important step is a provision lately made by which the meetings of the College are to be rendered both interesting and profitable, by a series of valuable papers which the members have agreed to furnish for at least the next three years. Such a momentum once acquired, it is believed will not readily lose its force.

The practical side is also seen in the establishment of the Directory for Nurses, one of the most valuable innovations the College has ever made. Along with this, and partly as a consequence made possible by it, it is proposed to open the Library during both day and evening, instead of limiting its use, as is now the case, to the few and busy hours of the mid-day. The Library and the Mütter Museum also have so outgrown their quarters that it is necessary to provide increased accommodations or both.

Another evidence of quickening life is a proposition which is being bruited for some social privileges in the College building. It is suggested that a room on the first floor be fitted up in which the Fellows may chat and smoke. Such a convenient place for a conversation-room has long been wanted. It will bring the Fellows into pleasant personal relations, and will relieve the Library also of much conversation which not seldom has annoyed readers and students.

For a number of years past the College has been much hampered by its limited income, and last year it was obliged to increase its annual dues fifty per cent. to meet its expenses. The College, unfortunately, unlike other similar bodies, has never made any provision for the commutation of its annual dues, and consequently has no invested endowment for general expenses. Had it been otherwise it is not without the bounds of probability to say that to-day the College would be a wealthy corporation. It behooves us in the present to think of the future, and we hope that we may be able before long to say that provision has been made for the commutation of annual dues by a single payment, and to urge upon the Fellows the desirability of availing themselves of this privilege so as ultimately to place the College in a position of affluence, in which it will be able to meet the growing wants of the future instead of being more hampered than at present.

It is perhaps almost too great an innovation—though it has been suggested, and we hope before long to see it realized—that the College should have an annual dinner, preceded by an address by the President—not so much a medical address as a review of the progress of the College for the past year, with suggestions of improvements and advancements for the future. We believe that not a little good would be done by such an arrangement—a plan which works admirably in England.

DOCTORS AND DRUMMERS.

A COMMERCIAL traveller of great experience with all classes of men, and very shrewd and discerning, was asked if medical men who had seen much of life were not difficult to deceive. Looking around to see that none of the fraternity were present, he said in a whisper, with a meaning smile and an expression of uncommon cunning, "*Doctors are the most gullible of men.*" Are there reasons for believing that this implied simplicity is a just estimate? Observing the number of those who, with a mysterious package, are seen to pass from one doctor's office to another, one can hardly doubt that our craft is not an evil-suspecting one. The peripatetic vendor of maps and serial publications; the solicitor of malt extracts, infant foods, elixirs, and pills; the agent of instrument, book, and electrical machine

houses, and the swarms of "drummers" of every conceivable business, apparently find in the medical profession a profitable body for the exercise of their various arts. Indeed, it may be doubted if the time and money of any other business or professional men are so diverted from their proper uses for the benefit of others.

The different kinds of solicitors who prey on the doctor have as various methods of attack. There is the confident man who walks in with a jaunty and familiar manner, and, taking the best seat, assumes that his particular ware is the doctor's special need. He produces his book to take down the order as a matter of course, and if it should so happen that the doctor declines, he looks up with an injured and surprised air, as if to say, "Can it be possible?" There is, also, the insinuating solicitor. He comes in with a deprecating manner, and will not be seated until pressed, and exposes his wares with some ingratiating suggestions of their value to the eminent physicians whom alone he visits. If successful, he grows confidential, and bestows an abundance of subtle compliments; if he fails, he reproaches only by an injured but resigned manner, and retires with a respectful reference to a future more successful interview. Another type, unhappily too common, is the unfortunate doctor, turned solicitor. He appeals by his appearance of need, by his claim of poverty. He failed in his profession not because of his shortcomings, but was combined against by all the hosts of misfortune. He will not only sell his wares supported by this claim, but he may be induced, although with much reluctance, to accept a little money for his immediate needs. Yet another variety is the impudent and hectoring drummer, who carries his objects with a high hand. He will force his goods on him who hesitates, and will support their quality with an abundance of strong language. He is readily offended by denial, and generally goes out in a huff when he fails to receive an order. If he sells his wares, he is voluble and patronizing, offers a cigar, and generally lights one, and, puffing away, goes off with the air of a conqueror. There is yet again the high-toned solicitor. He is correctly dressed, assumes the manner of a man of fashion who descends to business for amusement, and comes, if he can, with a letter of introduction. He expects to be treated with great consideration as a "high contracting party," and to receive an order in deference to his respectability. He is the most difficult of all the peripatetic gentry to conduct any business with, for to refuse to listen to his lengthy disquisitions, or to buy his wares, assumes the aspect of a personal affront, or a sacrifice of hospitality.

In what guise they come, or in what attitude they appear, the unsuspecting doctor falls a victim.

His amiability, or his credibility, or his sensibility, or his hospitality, may be in turn the avenue to his pocket. The net result is, the doctor is used to benefit some one who has no real claim to flourish on his bounty. It might be supposed by a superficial observer that doctors are easily deceived because weakly credulous. Nothing could be more unjust or erroneous. A disposition to see the best in human nature, a patient endurance of the weaknesses or failings of others, and a generous confidence in the pretensions of those who seem to be what they assume, are natural results of medical professional experience. Let us indulge the hope that these characteristics may be preserved. Long be the time before the physician shall develop the suspicion and lack of confidence in all mankind, which are the natural outgrowths of the lawyer's training.

WITH feelings of deep sympathy for the victim, the profession will read the graphic report which we give on another page of the attempted assassination of Dr. John P. Gray by an unguarded lunatic. The community surely has had sufficient warning of the danger of permitting even the apparently harmless insane to roam at large. As there is no telling when a lunatic may not suddenly become dangerous, a lunatic at large remains a constant menace to society. Certainly the time has arrived when a well-considered law should be framed requiring that lunatics should be kept under such supervision that human life may no longer be the possible price of their unguarded freedom.

THE Commencement of the University of Pennsylvania on the 15th instant was noticeable for at least one unusual feature. The bouquet is not only doomed, but gone, and no one will mourn. It had grown to be an intolerable nuisance, and we are glad the Class of '82 had the courage and good sense deliberately to abolish it by their programmes, which read "no flowers received." Formerly invidious distinctions were often made. A city man, who had many fair or partial friends, was burdened with a dozen bouquets, while he of Texas, or Minnesota, or Japan, unless, perchance, the lack was supplied by a wily but not over-honest trick, seemed neglected. To see a blushing, newly-fledged "doctor" hieing again and again upon the stage, his hands already cumbered with baskets and bouquets, each with the inevitable white lily in the centre, and fringed with a flimsy paper border, was simply ridiculous, and the "distribution of bouquets," with its noise and confusion, marred an otherwise dignified ceremonial.

ELSEWHERE we publish the resolutions adopted by the Medical and Surgical Society of Montgomery, Alabama, in reference to consultations with

irregular practitioners. The Society has done wisely in re-enunciating its sentiments, and it would be well if similar action were taken by medical societies generally, in view of the heterodox ethical doctrine which has recently been promulgated by the New York State Society.

REVIEWS.

ILLUSTRATIONS OF DISSECTIONS, IN A SERIES OF ORIGINAL COLORED PLATES, REPRESENTING THE DISSECTION OF THE HUMAN BODY. By GEORGE VINER ELLIS and G. H. FORD. 2 Vols. *Second Edition*. 8vo, pp. x, 233, 226. Pl. lviii. Library of Standard Medical Authors. New York: William Wood & Co., 1882.

This is a reproduction of Mr. Ellis's well-known life-sized plates. Of the text and original plates it is needless to say a word. They are admirable in all respects. The reprint differs chiefly in the size, all of the plates being reduced to a uniform octavo page. Most of them are clear and good, but some of the smaller plates, especially those of the head, face, and neck, are so much reduced as to lose a great deal in distinctness. This is especially true of plates xiii. and xiv., showing the interior of the skull. The size of the page would have allowed of far less reduction, and we think it unfortunate that they have been made so small.

The second volume contains the Perineum, Abdominal Parietes, Pelvis, and Lower Limb. Like the first volume, it is a marvel of cheapness, but it also loses much in distinctness by the reduction from the life-sized plates of the original. All who can afford the original ought to get it by all means, but those who cannot will find this the next best thing, and an excellent one for the money.

A SYSTEM OF SURGERY BY VARIOUS AUTHORS. Edited by T. HOLMES. *First American from Second English Edition, revised and enlarged*, by JOHN H. PACKARD, assisted by a large corps of the most eminent American Surgeons, in three volumes. Vol. III., with 423 illustrations. 8vo, pp. xxxvi., 1059. Philadelphia: Henry C. Lea's Son & Co., 1882.

The present volume completes this important and capital work. It contains chapters on the Diseases of the Respiratory Organs; of the Bones, Joints and Muscles; of the Nervous System; Gunshot Wounds; Operative and Minor Surgery; Diseases of the Skin; Parasites and Venomous Insects and Reptiles; the Surgical Diseases of Childhood; Surgical Diagnosis and Regional Surgery; and Hospitals. Among the American revisers are Drs. Solis-Cohen, Markoe, Bradford, Conner, Bartholow, McGuire, Morton, Leidy, and others. The two most important changes from the English edition are that Dr. Van Harlingen has re-written the chapter on Diseases of the Skin, and Dr. J. C. Reeve has so revised Lister's article on Anæsthetics as to make practically a new article of it—and a much better one. Dr. Reeve follows the well-nigh unanimous opinion of the profession in this country in advising ether in preference to all other anæsthetics, except nitrous oxide for short operations. Dr. Van Harlingen's article on the Skin, is an excellent brief *résumé* of our present knowledge of the subject, and worthy of his previous reputation. On nearly every page we notice bracketed additions, all too brief, it is true, in most cases, but valuable and to the point. The illustrations are again more than

doubled, a feature we have commended most strongly in the previous volumes. The paper, type, and general make-up of the volume could not be surpassed. The work is one of our most valuable surgical text-books.

RECENT PROGRESS IN SURGERY. A REPORT TO THE WISCONSIN STATE MEDICAL SOCIETY. By N. SENN, M.D., of Milwaukee. Reprint from the *Transactions of the State Medical Society of Wisconsin*. 8vo, pp. 44. Milwaukee, 1881.

We notice this reprint because of its excellence. If all committees in the various departments of medicine were to do such good work as this one, the members of our State Medical Societies would learn a deal, and the committees give a most excellent reason for their existence. Dr. Senn has taken up various topics, such as Surgical Pathology, Listerism, Partial Excision of the Alimentary Canal, the Radical Cure of Hernia, Gastrotomy, Nephrotomy and Nephrectomy, Subcutaneous Osteotomy, Fractures and Dislocations, Nerve-stretching, and a number of others, and has given a succinct *résumé* of what has been done in each within the last two or three years, with references to the original sources of information. The result is a capital one in every way. It is a kind of work which for his readers is excellent, but for the author even still better. His knowledge is extensive, methodical, and exact; his mode of statement brief, yet clear. We notice one very awkward Gallicism "recidivations," instead of "relapses;" and the omission of all allusion to contemporary French medical literature is unfortunate. While the notes refer to most of the best-known American and English journals, and bristle with "Blatts" and "Schriften," not a single French reference is given.

SOCIETY PROCEEDINGS.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, March 1, 1882.

W. S. W. RUSCHENBERGER, M.D., PRESIDENT, IN THE CHAIR.

A Case of Fungosities of the Bladder, Cured by Scraping with the Finger; with some References to the Literature of this Affection.—DR. WALTER F. ATLEE stated that he reported this case because it is a rare one, because it is instructive in a practical point of view, and because consultation with most of his works of reference would not assist the surgeon in benefiting a similar case as much as can be done by doing as was done here. The following is the history of the case:

Miss S. B. consulted me in the summer of 1880, on account of painful and frequent micturition, with hæmaturia. She was born in April, 1861; her father is a large, strong, and healthy man; her mother died when she was a child, after having suffered from many manifestations of scrofula.

She said she remembered to have felt, occasionally, a slight pain in passing urine, from her earliest recollection. When seventeen years of age she first suffered severely; her urine then was very light in color, with no sediment, but with a strong odor. The pain was felt while passing the urine and after it had passed; after the emptying of the bladder there was a constant desire to pass something more. She became thin, pale, and haggard. When eighteen years of age, some pus appeared in the urine, and occasionally a little blood. These symptoms increased to such an extent that she was obliged to keep her bed for several months. This rest, aided, perhaps, by medical treatment, for she had always enjoyed the care and attention of our most ex-

perienched physicians and nurses, made some improvement in her condition, so that she was able again to go out. All the worst symptoms, however, soon returned, and when I saw her, in September, 1880, her state was a very serious one; there was constant inclination to empty the bladder, which could not be resisted oftentimes for more than a half-hour, and the loss of blood was considerable.

The urine, when examined at this time, showed pyoid bodies, epithelium from the bladder, and crystals of triple phosphate, together with blood-corpuscles in abundance. The blood was of a bright-red color, showing that the urine had not had time to produce those changes in color always produced by long contact with the hæmaglobin of the corpuscles.

With such symptoms, this case seemed clearly to be one of foreign body in the bladder, and the advice given was to attempt its removal without delay. For this purpose the patient was put under the influence of anæsthetics, and the urethra was dilated by means of a pair of ordinary dressing forceps, introduced, opened, and withdrawn as often as necessary—this being, in my experience, the best way of effecting this dilatation.

When the finger was then passed into the bladder, nothing abnormal was felt, no calculus nor distinct tumors, except that about the fundus were a number of fungosities or soft growths, some of them more than a half inch in length, and about one line in thickness. These were carefully scraped off by the end of the finger and by the finger-nail. This simple operation resulted in the perfect cure of my patient, and until the present time there has been no symptom of a return of her disease.

Dr. Atlee said, I call the growths thus removed fungosities, and not villous growths, inasmuch as that they were not like tufts of fine hair (*villi*), but resembled rather *fungi*, or certain mosses. I have several times seen similar growths removed from the cavity of the uterus, in cases where for years they had been the cause of alarming hæmorrhage. They have, anatomically, the same fundamental structure as the mucous membrane whence they spring; they are simple excrescences of this membrane; they are formed of granular amorphous matter, of cellular tissue in small quantity, and of fibro-plastic elements; almost all have a large number of capillary vessels ramifying through them, and some are covered by epithelium. This epithelium is on the surface *homologous*, and not *within* the subjacent connective tissue, *heterologous*, which is characteristic of epitheliomatous growths.

Dr. Atlee said that one reason for reporting this case to the College, was, that consultation with most of his works of reference, would not enable the surgeon to benefit his patient as much as was done in this case. In Holmes's *System of Surgery*, it is said: "The indications are to allay pain, to subdue spasmodic action of the bladder, to prevent hæmorrhage by internal remedies, and to counteract its effects on the system by chalybeates and nutritious diet. Astringent injections very carefully introduced into the bladder, such as weak solutions of acetate of lead, or of nitrate of silver, may be tried; they are, however, not to be repeated more than once or twice, unless marked benefit is observed, and signs of vesical irritation have not been produced by their employment." This is the advice given in almost all surgical works, not only general but special. Even in Coulson's excellent work on *Diseases of the Bladder and Prostate Gland*, of which a sixth edition was published in 1881, we find nothing but a similar plan of treatment recommended. Though quite out of place, I will cite here the diagnostic symptoms given in Coulson's work between villous growths and calculus, as being the best and clearest I have ever met with. In all works the diagnosis of these growths is

said to be extremely difficult: for example, in the *Dictionnaire de Médecine*, it is said, "Fungus of the bladder may be suspected, but a precise diagnosis cannot be established."—Tome xxx., p. 744. "The pain in calculus is most severe after the urine has been passed, but in villous tumors the discomfort is aggravated by fulness of the bladder, and relieved by its evacuation. The pain in calculus is relieved by rest, which has little or no effect upon the symptoms of tumors of the bladder. The hæmorrhage also in the latter affection is neither decidedly aggravated by movement nor relieved by rest. In villous growths, the blood is generally pure; in hæmaturia, due to calculus, there is generally more or less pus mixed with the blood. Examination by the rectum, or with a sound in the bladder, causes pain in cases of villous growth, and increases the hæmaturia, whereas the symptoms of calculus are not necessarily aggravated by these manipulations."

To return to treatment, Nélaton says: "In women, it is sometimes possible to reach the fungus by dilating the urethra and the neck of the bladder. The case of Warner tying a polypus of the bladder in this way is recorded above; and in case of a fungous growth, an analogous operation should be done."—*Pathologie Chirurgicale*, tome v., p. 301.

In Warner's case, above referred to, a polypus penetrated into the urethra of a young woman, and pushed out of the meatus. An incision was made, dividing the half of the urethra, the rest was dilated, and also the neck of the bladder, the tumor was drawn out, and a ligature applied to the pedicle.

In the *Principles and Practice of Surgery* of Prof. Agnew, and in the third edition of Prof. Gross's treatise on *Diseases of the Urinary Bladder*, revised by Dr. Samuel W. Gross, we are advised when symptoms of papillary and polypoid fibromas are seen in women, to dilate the urethra by special instruments, and remove them as may be found best under the circumstances of the case. Some eighteen cases, altogether, are recorded in these works where vesical growths were removed by various operations. Of the prognosis in such cases, Dr. Gross forcibly and truly says: "It is of the worst possible description. Death almost invariably follows from sheer loss of blood, or the combined effects of hæmorrhage and pain." Of the treatment, he says "surgical interference is demanded imperatively, since, without it, a fatal issue is almost the inevitable result."

The best account I have met with of the flocculent excrescences, or fungosities in the bladder, is contained in the *Lectures on the Surgical Disorders of the Urinary Organs*, by Reginald Harrison, 2d edition, London and Liverpool, 1880. Mr. Harrison refers to the paper of Robert S. Hudson, in the *Dublin Journal of the Medical Sciences* for June, 1879, to that of Prof. G. Murray Humphrey in the *Medico-Chirurgical Transactions* for 1879, which contains probably the best account to be found of the pathology of growths into the bladder, to Mr. Norton's cases in vol. xii. of the *Clinical Society's Transactions*, and to a paper of J. H. Roberts and C. De Morgan in vol. xxi. of the *Transactions of the Pathological Society*, where the microscopical appearances are very beautifully represented. He also relates a case (p. 359) communicated to him by a Dr. Alexander, where chloroform was given and the urethra dilated; a wire *écraseur* was passed, and a large growth was removed; smaller growths were removed by the finger. Fifteen months afterwards it was necessary to remove some more by the finger, after which the patient remained well.

This case of Dr. Alexander is doubtless the same as that related in great detail in the London *Lancet* for August 17, 1878. The writer says he cannot find any other case recorded of removal of a villous growth from the female bladder, and quotes from Bryant's *Surgery*

"that there is no cure for this affection; the surgeon can only relieve symptoms. The disease usually destroys life in about two years."

Enough has been said to show that cases such as I here report are rare; that they cause great suffering, and, eventually, loss of life, that the means usually recommended fail in giving relief, and that an operation, easily performed, attended by no risk, and followed by no bad consequences, does cure such cases, and that this operation appears to be very generally unknown.

One more observation may be permitted, indeed, seems called for, in this rather desultory paper. This is, that the history of a case such as is here related, justifies us in looking favorably upon the resort to a similar proceeding in cases of similar disease in the male patient. An incision into the neck of the bladder, when so much suffering and so great danger to life are present, is surely justifiable. It is a matter of no great difficulty nor danger. Even if it was found, after the making of this opening, that the diseased tissues could not be taken away, the patient would, in all likelihood, obtain some relief from the free passage afforded to the purulent and bloody discharges. There is a case recorded (see *British Medical Journal*, vol. ii., 1875, p. 493), where Billroth did this, and encountering a fibrous tumor, the size of which was such that it could not be extracted through the perineum, he cut through the recti muscles above the pubic bone, made a transverse incision into the bladder, and then tore through the tumor near its base with the finger, and dissected out the pedicle; the patient was perfectly cured.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 16, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

AFTER the usual reading of the minutes, the President announced the presence of Drs. Billings, Edgar, and Clements, U.S.A.

DR. H. G. PIFFARD exhibited one of Dr. Felton's medical batteries. This battery was of small size. The interruption of the current was many times more frequent than in any of the induction machines now in use. It was quickly made ready for transportation by removing the zinc, and putting in a cork. The delicacy of the current and frequency of the interruption was considered a very great advantage. The cell was comparatively large in proportion to the elements, and, hence, would only require renewal of fluid at long intervals. It belonged to the class of continuous coil batteries.

The scientific paper of the evening was by DR. FRANK H. HAMILTON, entitled:

The Struggle for Life against Civilization and Æstheticism; a Supplement to the Discussion on Plumbing, etc.

Full one-half of the paper was devoted to the rehearsal of the points made in Mr. Wingate's paper, before the Academy of Medicine at a previous meeting, on plumbing and house sanitation, and points brought forward in the discussion which followed that paper. In regard to sewer-gas, Dr. Hamilton said, the gases which are commonly known under the name of sewer-gases, are the most potent agents of disease. By means of them, it is certain that typhoid fever and diphtheria are propagated, and it is my conviction that many other zymotic diseases, such as Asiatic cholera, may be, and sometimes are, propagated in this way. I state this the more boldly because I find that the opinion is shared by many others, whose views are entitled to respect. Of course, these gases could not enter our houses if it were not for badly-constructed sewers and sewer-pipes. It is thought by many to be enough for safety if all traps are flushed by water. But it is well known that water is no protec-

tion against these sewer-gases, for they pass readily through it.

Our hearts were all touched by Dr. Doremus's allusion, a few weeks ago, to the death of his boy, by a sickness caused by the defective plumbing of the house in which he lived. Who shall say how many such deaths there are in this city? And in view of these facts, in view of our failure to introduce a perfect sanitation, is it strange that Dr. Barker said that, were he building, he would have the water-pipes and sewer connections in an annex?

What, then, is the upshot of all this matter? If these sanitary engineers, chemists, and hygienists, who were requested to take part in the discussion of Mr. Wingate's paper, because of their knowledge and scientific attainments, experience and practical skill, have nothing more to suggest, how is the evil to be successfully met? With all respect to the gentlemen whose views have been presented to us in past discussions, I must say that they have suggested nothing of any importance which is new; nothing that was not known before; nothing, indeed, which has not been tried, which has not, for one reason or another, proved itself to be either impracticable or insufficient, and, in many cases, totally inefficient. Science has not kept pace with civilization, and without concessions on the part of civilization there is, at present, no adequate remedy for the evils we suffer. Since Bede's day we have had occasion to observe that when men left the open plains and the small hamlets, and crowded themselves into the narrow limits of cities, the ratio of sickness and death was proportionately increased. When, also, in the progress of civilization, the fire-places disappeared, with their great open throats—the best ventilations ever invented—and decorated cast-iron stoves were substituted, house sanitation experienced a loss which no sanitary engineer or architect has ever repaired; and when, in obedience to the same inexorable demands of progress in luxury and æstheticism, gas was substituted for oil, and hot-air or hot-steam furnaces for stoves, the hand was again moved forward another point on the dial of human life.

Possibly nothing will so forcibly illustrate the magnitude of the evil we are considering as the fact that it has given birth to a new profession. The calamities necessarily incident to the progress of civilization, long since made it necessary that there should be a class of educated men, whose duties it should be to look after the rights of citizens, and another class to attend to matters of health, and now a condition has arisen which renders necessary a new class of specialists or professional men called "sanitary engineers," who are supposed to be well informed in matters of hygiene, architecture, or house construction and engineering, and who for the present seem to find plenty of occupation, and are, no doubt, performing a much-needed and very useful service, but of whom it may be said that up to the present time there is no evidence that they have done anything more than to investigate the evils that they have been asked to remove; and, indeed, there may be found many notable examples in which the best sanitary engineers have failed to effect even a mitigation. I repeat, that in order to render pure and innocuous the atmosphere of our houses, it will be necessary, first of all, that civilization should make some concessions. The concessions demanded as a condition of the successful application of our present knowledge of the laws of hygiene are:

1. That all plumbing having any direct or indirect communication with the sewers shall be excluded from those portions of our houses which we habitually occupy—in other words, that it shall be placed in a separate building or annex.

2. That we return to the open fireplace or the grate, as a means of warming our houses.

3. A diminished consumption of oxygen by gas-burners. It is still an open question whether we shall be able to light our dwellings with electricity, but so long as we are obliged to depend upon gas, we must content ourselves with light, and not insist upon illumination.

The concessions demanded are named in the order of their importance. The necessity for each is urgent, but the first admits of no compromise. However, there are many other possible sources of ill-health and physical decay incident to civilization than those I have referred to especially. The wholesome light of the sun is partially excluded from the apartments of wealth and luxury, because it fades the costly rugs and drapery, and offends the educated eye by its vulgar and intrusive garishness, and not unfrequently at large receptions the light of day is excluded wholly, in order that the more æsthetic and kaleidoscopic effects of gaslight may be substituted, regardless of the fact that the air is thus rendered unfit for respiration. Our social habits demand that both children and adults shall devote the hours nature intended for sleep to amusements, which amusements are rendered more intoxicating and pernicious by the prolonged respiration of heated and poisonous air. Dress makes its contribution. Utility and regard for health are almost invariably made subservient to the caprice of fashion and the study of effect. Flimsy head-dresses, low necks, short sleeves, tight corsets, high heels and narrow toes do not contribute the sum total of the æsthetic requirements of civilization in the matter of dress. Walking, as a means of locomotion and of exercise, is rendered difficult and sometimes impossible. To romp, or even to move with rapidity and sharp angularity, is unseemly in young ladies. And such young men as "move" in the most refined and polished circles, neglecting robust and manly out-door exercises, pose in attitudes which demand the least possible muscular exertion, or dawdle in effeminate dissipation. In the "best" society there is neither muscle nor backbone. Almost all respectable citizens ride when they might walk, and complain of the want of breath when the absence of an elevator compels them to ascend a flight of steps. Even when travelling, over-heated cars, long confinement in one position, hurried and irregular meals, dust and smoke, bring us to the end of our journey weary, and often sick. Railroads have enabled us to accomplish more in life than was possible when men travelled in coaches or on horseback, but it is doubtful whether in the shortening of human life it has effected the loss is not greater than the gain. All of these evils, and thousands not enumerated, are the necessary incidents to civilization, and medical men are painfully familiar with the impediments they present to the preservation of individual and public health. Indeed, as has been already suggested, it was the presence of these evils chiefly, which has rendered our existence as an integral part of society necessary. Nor do I assume too much in saying that, were it not for the teachings of medical men, the physical decay of the human race, under the adverse influences of civilization, would be rapid and complete.

THE PRESIDENT, in opening the discussion, said that the grand point to keep in view is the practical application and advantages necessary for the protection of ourselves, our families, our patients, and the community at large. Hence, it is hoped that the general tenor of the discussion will take this direction. He was happy to state that Prof. Doremus was present for the purpose of speaking upon this subject and demonstrating a few points.

PROF. DOREMUS called attention to a chart which hung on the wall, showing the solubility of various gases in water. If, therefore, we had a gas on one side of a trap containing water, the gas would be absorbed by the water, and, as a consequence, would pass to the

opposite side. To illustrate this the following experiment was performed: A three-necked bottle was taken, into which some sulphide of ammonium had been placed. Through the cork in one of these necks a long tube was projected above to represent the ventilating shaft; a bent U tube was made use of, upon the opposite side of which was placed a paper moistened with the sulphide of lead. The sulphide of ammonium passed through this tube, darkening the paper, notwithstanding the presence of the ventilator. A second experiment was performed similar to the first, with the addition of a trap, into which was placed some permanganate of potash. In its passage through the trap the sulphide of ammonium was decomposed, and produced no effect upon the paper. In a third experiment the chloride of zinc was placed in the bent tube, and a similar result obtained. He considered that it was thus proved that gases passing through a trap might be decomposed by some such chemical substance as permanganate of potash, chloride of zinc, sulphide of iron, and many others. The power of this permanganate as a decomposing agent was beautifully shown by a simple experiment. To a quantity of indigo water was added an equal quantity of water which contained a single drop of permanganate, and immediately the solution of the indigo was decolorized. He wished to have it understood that he still adhered to the observation that he made at a previous meeting, which was to the effect that sewer-gases would pass through traps, notwithstanding they were filled with water, and notwithstanding the contrary had been stated since the time alluded to, in the course of two lectures delivered in Columbia College. The speaker called attention to the quantity of impurities set free in the process of burning ordinary illuminating gas. Prof. Faraday, many years ago, had devised a beautiful mechanism by which the carbonic acid gas, vapor of water, and other products of combination of illuminating gas, were carried completely out of the building. By experimentation, it had been determined that one gas-jet would take away from the oxygen of the room as much as would be consumed by eight or ten persons, hence the point raised in the paper was an important and interesting one—very important in connection with the use of the electric light, where there is no robbing the air of oxygen.

At the request of the Chair to name the cheapest and most practicable chemical substance to make use of in the decomposition of sewer-gases, Prof. Doremus said that the manganate of sodium and the sulphide of magnesium had been very successfully used by heating the two together and producing a permanganate which liberated ozone. Prof. Mallet had recently devised a very cheap method of manufacturing the chloride of zinc, which was also a valuable agent.

DR. BILLINGS, U. S. A., of Washington, D. C., being called upon, said that when he was asked by the President to be present and make a few remarks, he was at a loss, from reading the title of the paper, to know the character of the speakers' remarks. But, as he had now heard the paper, he would say, first, in reference to plumbing, that while it was perfectly true that gases are absorbed by water, and would be given off on the other side of the trap, it must not be forgotten that the gases are not present in our soil-pipes in any such quantities as in the glasses with which the experiments had just been performed. In order to determine just how much gas was present in our sewer-pipes, an elaborate series of experiments were performed last year in Glasgow by a competent medical gentleman. He took an ordinary water-closet, placed an apparatus over the bowl, removing the top, and collected and analyzed the gases given off during a given space of time. He did this under two conditions: first, when the soil-pipe

was carried directly up through the house and opened at the top, in which case there was no pressure on the water in the trap; and, second, when the pipe was closed at the top. Now, when the soil-pipe was freely open above, the amount of ammonia and hydrogen given off in the course of four hours was almost imperceptible. When closed, the quantity was about triple. This was in an old dwelling, which, upon removal, was found to have a very foul soil-pipe. When there was an opening on the house-side of the trap, so that free air could pass through the soil-pipe, the amount of dangerous gas present was so exceedingly small that it was not worth while taking it into account. As to the question of the ill effects of these gases on the health, some go so far as to say they are never manifest. He, however, considered it probable, though it had not been scientifically demonstrated, that these gases, present in considerable quantity, were injurious to health; and he also considered it extremely probable, that what we call specific infectious diseases, are not produced by gases arising from the decomposition of filth, dead animals, or decaying vegetable matter, under any conceivable conditions of moisture, else why were they not more prevalent in the tropics?

Dr. Billings discussed the paper at great length, and brought out many interesting points not touched upon in the paper, or the discussion which followed the reading of Mr. Wingate's paper a few weeks previous.

The paper was further discussed by Prof. Doremus, Dr. Andrew H. Smith, Prof. Janeway, and by its author, Dr. Hamilton.

CORRESPONDENCE.

THE MEDICAL ATTRACTIONS OF LEIPSIK.

To the Editor of THE MEDICAL NEWS:

SIR: The winter semester is rapidly drawing to a close, for though its end is set down for March 15, most of the lectures will stop before that time. The summer semester, which is advertized to open on April 17, will last till August 19, and it may interest some of the readers of *THE MEDICAL NEWS* to know what is offered to the student of medicine here in Leipsic during the summer months.

To begin with anatomy. This branch is represented by Profs. His and Braune, the former so well known from his numerous contributions to histology and embryology, and the latter from his *Anatomical Atlas of Frozen Sections*. Prof. His will give a course in general histology of three hours three times a week, the first hour being devoted to a lecture and the last two to practical work with the microscope. The specimens are, as a rule, already cut and stained, the student being supposed to be already familiar with the ordinary histological technicalities. In this way much time is saved for actual observation and study of the specimens themselves. Further instruction in histology is given by Prof. Wenzel and Dr. Gaule.

Prof. Braune devotes four hours a week to a course on topographical anatomy, and three hours a week to osteology and arthrology.

In addition to the above, Prof. His gives a course in the developmental history of the higher animals and man.

The Anatomical Institute is a model of its kind. It is a large building, standing alone, and is used for nothing but the study of anatomy. The cadavers are all kept in alcohol, so that the usual odor of a dissecting-room is entirely absent. The flesh looks, and indeed smells, not unlike smoked beef, and on a body so preserved one may work for months without its becoming in the least offensive, and I need hardly add that very

fine and beautiful dissections are thus made. Alcohol is very cheap here, the duty being light, and its use as a preservative is thus possible.

The lecture-room here, as well as at the Physiological Institute, is lighted by electricity, the Siemen's lamp being used.

The Physiological Institute is presided over by Prof. C. Ludwig; Prof. Drechsel having charge of the chemical laboratory, and Dr. Gaule of the histological department.

Prof. Ludwig will lecture on the physiology of nutrition five days of the week; and will, besides, receive into his laboratory, as special pupils, such as desire to make researches on particular subjects. The laboratory is celebrated for the number of valuable contributions to physiological science that have issued from it; and none who have had the privilege of working there leave it without carrying away, not only the fruits of study obtained under so excellent a teacher as Prof. Ludwig, but also the most pleasurable recollections of the kindly, genial man, who inspires in the breasts of all his pupils a true enthusiasm for their work and a deep affection and veneration for himself. Dr. von Frey, his assistant, will give a course in physiological optics.

Instruction in the Practice of Medicine is given by Prof. E. Wagner and Prof. Erb, the well-known neurologist. The latter holds a medical polyclinic five times a week, where all kinds of cases are shown, though preference is given to those of neurological interest. Prof. Erb will also lecture on diseases of the organs of circulation, respiration, and locomotion, and give a practical course in Neuropathological Diagnosis. This course was given, for the first time, last year, and was very highly praised by all who were in it. Prof. Erb is an excellent teacher, and his clinic is largely attended. Prof. Wagner's clinic is held every morning, in the auditorium of the St. Jacob's Hospital, the patients being wheeled in on their beds. Those students who wish to do practical work, inscribe their names on the list of "practicants," as they are called, and every morning, at the beginning of the clinic, the new patients admitted are assigned to them in turn. The practicum visits the patient, and, without any outside aid, takes his history, examines him, and makes his own diagnoses. (Of course, this only applies to patients not likely to be harmed by an inexperienced examiner.) The next morning the patient is wheeled into the auditorium, and the student, to whom he has been assigned, gives the history and the results of the examination before the class, Prof. Wagner making remarks, supplementing omissions, and correcting mistakes. The patient is then re-examined by the Professor, a diagnosis is made, the case in general is considered, and the treatment spoken of.

This system is a very good one, for, in the first place, it teaches a student to rely on himself, and to apply his knowledge, when brought into personal contact with a case of disease; while, on the other hand, it gives him a chance to see exactly what his deficiencies are, and, furthermore, as his work will be criticized before his classmates (representing here what will, later, be the public in general), he naturally strives to do his best, and so habits of care and precision are formed.

Twice a week the students are taken through the wards, and shown such cases as cannot be brought into the auditorium. Prof. Wagner's relations with the members of his class are cordial and unconstrained, for he seems to have the faculty of making every one feel at his ease.

The hospital, a new one, is on the barrack system, each barrack containing but a single ward. Interesting material is abundant.

Though the medical clinics are excellent, yet, since I am writing for Americans, I must say that they are no

better than those held in Philadelphia, New York, Boston, and other large cities, by the representative men of the profession, and, as far as treatment is concerned, I do not see that there is much to be learned.

The surgical division of the hospital is directed by Prof. Thiersch, well known from his pathological investigations. A daily surgical clinic is held, and although any one fresh from an American hospital might perhaps be struck with the peculiarities of operating exhibited here, still the clinic is not entirely devoid of interest. At Halle, a university town but half an hour's ride by rail from here, there are Volkmann and Olschhausen, both beautiful operators.

The Pathological Institute has Prof. Cohnheim for its head, a man whose name is known and honored wherever medicine as a science is cherished. Prof. Cohnheim will give a course in practical demonstrative pathology, including the making of autopsies, and, in conjunction with Prof. Weigert, a course in microscopic pathological anatomy, each for two hours, three times a week. The latter is for beginners, while those who desire to do more advanced work are admitted into the microscopical laboratory of the institute, where Prof. Weigert and Dr. Huber give instruction; the former well known by his investigations into tuberculosis and his methods for staining micro-organisms. Prof. Cohnheim takes personal charge of the laboratory for experimental pathology, to which a limited number of special students are admitted, opportunity being thus given to become acquainted with the methods of research of this eminent master. Prof. Weigert and Dr. Huber both give courses in special pathological anatomy in addition to the above.

The department of gynecology and obstetrics is presided over by Prof. Cr  de, at the Frier Institute, a building erected especially for the cultivation of these two branches of medicine. From what I have heard the material is tolerably abundant, and students have frequent opportunities of witnessing and assisting at births and obstetrical operations. Dr. Leopold, Prof. Hennig, and others give numerous courses on special allied subjects.

Prof. Hofmann and Dr. Emmerich lecture on hygiene, special students being admitted to the laboratories for practical study in the methods of investigation.

These are the chief attractions of Leipsic as a medical centre, though I should add that good courses are given in the special branches of medicine. Prof. Coccius and Dr. K  ster have classes for diseases of the eye; Prof. Hagen, for the throat and ear; Prof. Heubner, the author of *The Syphilitic Degeneration of the Cerebral Vessels*, etc., has a clinic, and lectures on diseases of children; Dr. Neisser, the discoverer of the *bacillus leprae*, has a class for skin diseases and syphilis; Prof. Flechsig, celebrated for his contributions to the anatomy of the spinal cord, has a clinic for psychiatry at the Insane Asylum, and Prof. Schmidt has the surgical policlinic. Courses in physical diagnosis, in the use of the ophthalmoscope, the laryngoscope, etc., are given by the "Privat Docenten," and others.

While the clinical advantages are, as I have shown, good, yet it is for the departments of pathology, physiology, and anatomy, that Leipsic is chiefly frequented by foreign students. The laboratories are commodious and well appointed, the instructors among the most eminent in their profession, and every facility and courtesy is offered to those who want to work and study.

Living is cheap here, lodgings costing from \$3.75 upwards—a very good room may be had for \$6 a month, or even less; meals may be taken either in the house, by special arrangement, or, as most students do, at restaurants. The city in itself presents many attractions, there being an excellent opera and three theatres,

besides the weekly concerts of the celebrated Conservatory of Music.

Very truly yours,
WALTER MENDELSON.

LEIPSIC, March 2, 1882.

NEWS ITEMS.

BUFFALO.

(From our Special Correspondent.)

ATTEMPTED ASSASSINATION OF DR. JOHN P. GRAY.—Dr. Gray returned on Thursday night, at 5.45, from Washington, where he had been examining, with District Attorney Corkhill, the medical portion of the bill of exceptions in the Guiteau case. After taking tea, he came down to his private office, and sent a messenger to Dr. E. N. Brush for his mail, which had accumulated in his absence. Dr. Brush carried it across the hall to him, and stood for a few moments at his left hand, explaining to him the nature of some of the letters, and how far he had answered them. When he left the office, at five minutes to seven, Rev. Dr. Gibson, the Chaplain of the institution, who had come to the asylum for the purpose of lecturing to the patients, was sitting at the Doctor's library-table, opposite to the Doctor; Dr. G. A. Blumer, of the staff, was standing at a corner of the table, at Dr. Gibson's right hand; Mr. John P. Gray, Jr., was standing at the right of, and a little behind his father; Dr. Gray and Dr. Gibson were discussing a translation of one of the Odes of Horace, which Dr. Gibson had recently made, and just as Dr. Brush left the office Dr. Gray reached forward and took the manuscript, and leaned over the table to examine it as it lay before him. Dr. Brush passed from the office into the wards, with Dr. Josselyn, another member of the staff, to see a sick patient. During Dr. Brush's absence, and within a very few minutes after he had left the Doctor's side, the would-be assassin entered the front door of the asylum, passed down the main hall to the Doctor's office, stepped just within the door, and, without a moment's hesitation, drew a large navy revolver, carrying a No. 38 calibre ball, and fired. Turning upon his heel, he hurriedly retraced his steps, and passed out the front door. He was followed by Dr. Blumer and Mr. John Gray, and as they stepped out upon the portico, he, having preceded them a few feet down the lawn, turned and fired another shot, and disappeared in the darkness.

When Dr. Brush reached Dr. Gray, he had gone up-stairs to his bath-room on the floor above. He found him bleeding somewhat profusely from the nose and mouth from the bullet wound. The ball had entered over the left malar bone, a half an inch below the outer angle of the eye, and made its exit in the centre of the right cheek, an inch and a half below the outer angle of the right eye, and half an inch back of a vertical line drawn from that point. The left side of the face was filled with powder, so closely had the pistol been fired to his face. A hurried examination satisfied Dr. Brush that the h  morrhage through the mouth came from the posterior nares, and that no important vessels were wounded. In a short time active h  morrhage ceased, although oozing continued for some hours. The left eye was almost immediately closed by the infiltration of blood in the tissues surrounding it, and in a short time the right eye was in a similar condition, and the whole face swollen and distorted. As soon as the trickling of blood into the pharynx ceased, the doctor was placed in bed. There was no shock, the temperature remaining normal, and the pulse not rising above 90. The Doctor exhibited remarkable coolness and fortitude. As far as he was able, he directed what should be done, and gave the officers valuable hints in regard to the prob-

able assailant. Since the injury he has done better than was anticipated. He has taken light food in sufficient quantity, his pulse has not exceeded 90, and his temperature has not risen above 100°, and only once has it risen to that point. Of course his attendants are anxious and somewhat apprehensive, but hope for the best.

The assassin was Henry Remshaw, a veteran soldier, aged forty-six years. Immediately after committing the deed he went to the house of a Mrs. Yearhling. He appeared laughing, and said he had had a row, and had "done it at last." Mrs. Yearhling told him to come in and shut the door. He did so, and she asked, "Henry, what have you done?" Remshaw capered about the apartment as though in high glee, and finally answered, "Well, I've killed Dr. Gray at last. I am going to give myself up, and I will be away for a few days." After exhibiting pistols and knives, he left, and soon the police came. Remshaw appears to have proceeded directly to the Mohawk Street Jail, where he found Mrs. Appleton, the jailer being absent. The lunatic approached the jailer's wife and asked for her husband. Mrs. Appleton replied that he would return shortly. Remshaw said, "I've shot a man. I didn't kill him, but it's all right sure enough. I shot Dr. Gray." When the jailer returned, Remshaw said, coolly, "Well, Bill, God delegated me to kill Dr. Gray, and Capt. Jones told me to give myself up to you. I shot Dr. Gray in the face." Mr. Appleton asked Remshaw whether he had any arms about him, and Remshaw produced the following: Two large navy revolvers, loaded; one four-barrel repeater, loaded; one heavy calibre derringer, loaded; one revolver; one heavy Spanish dirk-knife; twenty-one packages of forty-four calibre cartridges, six in a package; two cases of large cartridges; one bottle acetum opii; one bottle of oil; two revolver cleaners.

The jailer telephoned to the Police Station, and Assistant Chief McElwaine despatched Officer Latham to the jail for the prisoner. He walked to the station house quietly, being handcuffed to the officer. He conversed calmly about his crime, and expressed no regrets. During the night he slept most of the time.

WASHINGTON.

(From our Special Correspondent.)

THE NEW NATIONAL MUSEUM AT WASHINGTON, D. C. —For a number of years the establishment of a national museum at Washington has been a favorite project with the distinguished head of the Smithsonian Institution, Prof. Spencer F. Baird. He, more than any other person, from his long connection with the Smithsonian Institution, appreciated the importance and necessity of such an enterprise. There existed in the collections of the Smithsonian many aggregations of practical and scientific value which could not be made generally available in consequence of the want of space in which to manipulate and display them. This disadvantage was long felt, but when so many large and valuable collections were donated to the United States by foreign governments, from the Centennial Exhibition, additional space became an absolute necessity. These contributions could not even be unpacked from their boxes for want of room, being stored in an old building near the Smithsonian known as "the armory," where they were in danger of being damaged from want of proper care. To meet this need, Congress, in 1880, appropriated \$250,000 for a national museum. A Building Commission was appointed by the Regents of the Smithsonian, consisting of Prof. Baird, Gen. Sherman, and Hon. Peter Parker, by whom careful plans were drawn up, and the money expended in building the present structure.

The Museum adjoins the Smithsonian building on the east, and is two hundred and twenty-seven feet square—covering two and a quarter acres of ground. The energy with which the work was pushed is indicated by the fact that in one year after the appropriation was made, the building was under roof, and on March 4, 1881, Mr. Garfield's inaugural reception was held in it. It is one of the largest museum buildings in the world, and if the plans entertained for the future are realized, the Museum will compare favorably, if indeed it does not excel in usefulness, the British Museum itself. This building is unique in one particular—that it is all under one roof, all on one floor, and all in one room, the partitions into halls being made of the exhibition cases. It has a capacity of 1200 to 1500 large exhibition cases, which will vary in pattern to suit their varied contents. About 250 have already been received, and are being rapidly placed in position. At the four corners, and over the four main entrances of the edifice, are towers containing offices, laboratories, and working-rooms to the aggregate number of 160—all now full of workers.

Prof. G. Brown Goode, the assistant curator, is an indefatigable worker, upon whom devolves the executive management of the exhibits, under the supervision of the curator, Prof. Baird. Prof. Goode is specially adapted to his work, has no end of enthusiasm, and is rapidly bringing order out of chaos. He states the objects of the Museum to be threefold:

1. To gather material for original investigations.
2. To preserve as matters of record materials upon which past investigations are based.
3. To prepare for the use of the people of the United States an educational museum of the most liberal and comprehensive kind, in which fundamental facts in every department of human activity shall be illustrated by a series of well-chosen specimens, the meaning of which shall be explained by descriptive labels.

Ideas which cannot be illustrated by specimens, will be demonstrated by means of diagrams and pictorial representations.

This indicates the broad scope of work laid out, and the possibilities of usefulness cannot be overestimated. Some conception of the immense value of such a collection to the people may be formed from the fact that even in its present incomplete condition there were over 200,000 visitors to the Museum last year.

The authorities propose that every facility shall be given to persons desiring to study closely any of the exhibits; and where such persons come properly accredited, with an earnest desire to investigate, not only will they have access to the specimens, but will also have the privileges of laboratory facilities extended to them.

The following is a list of the officers of the Museum, and of the departments and sections, with the names of the gentlemen in charge of each, as far as at present determined:

Divisions of Exhibits.—Director of Museum, S. F. Baird; Assistant Director of Museum, G. B. Goode; Department of Arts and Industries, G. B. Goode; Department of Fishes, T. H. Bean; Department of Mollusk, Wm. H. Dall, E. C. Stearns, Assistant; Department of Minerals and Economic Geology, George W. Hawes, F. P. Dewey, Assistant; Section of Materia Medica, I. M. Flint; Section of Foods, I. Howard Gore; Department of Marine Invertebrates, Richard Rathbun; Department of Antiquities, Charles Rau; Department of Birds, Robert Ridgway; Department of Insects, C. V. Riley; Section of Bird Skeletons, R. W. Shufeldt; Department of Mammals and Librarian, F. W. True; Department of Fossil Plants, Lester F. Ward; Chemist, F. W. Taylor; Department of Reptiles, H. C. Yarrow.

There are three sections of the Museum which are of

special interest to the medical profession, namely, 1. The Section of *Materia Medica*, Surgical Appliances, Clinical Thermometers, Pharmaceutical Apparatus, etc.; 2. The Section of Food Products; and, 3. The Section of Chemistry and Laboratory Apparatus.

The Section on *Materia Medica*, which is one of the greatest interest to the medical profession, is under the care of Surgeon I. M. Flint, U. S. N., who was detailed for the purpose by the Surgeon-General of the Navy.

Dr. Flint has shown himself to be eminently qualified for the position, and is developing the material in his hands to its highest practical usefulness.

It is intended that the *Materia Medica* collection shall be made as complete as enterprise, industry, and expense render possible; for, although the collection will be largely composed of gift contributions, still, where it becomes necessary to fill out a series in any direction by purchase, expense will not be spared.

The size of the Museum-building insures abundant space for display, and much time has been bestowed upon the arrangement, in order that the collection may be shown in the most advantageous manner.

The bottles have been made to order of clear white glass, and are, as nearly as can be, of uniform size. The specimens are furnished by donation from the firm of Schieffelin & Co., of New York, who have already forwarded about fifteen hundred packages and bottles.

It is proposed to display the drugs in groups, showing the crude drug with all its preparations, alkaloids, etc., except such as are perishable and cannot be preserved in a collection. No proprietary medicines will be given a place unless accompanied by the formula, and then only when sufficiently well known to be of general interest.

The following circular, prepared by Dr. I. M. Flint, and just issued by the Museum, gives the classification and arrangement of the *Materia Medica* collection adopted:

Primary Divisions.—I. Inorganic *Materia Medica*. II. Organic *Materia Medica*. 1. Vegetable products; 2. Products of fermentation and distillation; 3. Animal products.

I. Medicines of the inorganic division, to be classified according to their fundamental elementary constituents, following the order of the elements given in Roscoe and Schorlemmer's *Treatise on Chemistry*.

With each elementary substance to be arranged—

1. The chemical compounds of that element used in medicine and pharmacy.

2. The preparations of which that element, or any of its compounds, constitutes the fundamental ingredient.

These preparations to include—

a. The official preparations of the United States Pharmacopœia.

b. The official preparations of foreign pharmacopœias which are not recognized by the United States Pharmacopœia.

c. Unofficial preparations which are considered to be of sufficient importance or interest to be worthy a place in the collection.

Poisonous salts, liable to be mistaken, on account of similarity of appearance, for those less active, should be shown with the latter also.

II. 1. Medicines of vegetable origin to be classified according to the botanical affinities of the plant from which derived, following the sequence given in Bentham and Hooker's *Genera Plantarum*, beginning with the lowest order.

Under each natural order to be arranged—

A. The official drugs derived from each plant of that order.

B. Drugs not official in any pharmacopœia, but which are or have been used in medicines.

With each crude drug to be displayed—

a. A colored plate of the plant from which it is derived, with figures illustrating its botanical characters.

b. A specimen of the flowering plant, pressed and dried, in the usual manner of an herbarium.

c. The drug in all its varieties, commercial and botanical. These specimens primarily should be fair commercial samples, such as will honestly represent the article as found in the market. They may be supplemented by carefully selected, or rare samples, or by those adulterated or possessing interesting peculiarities of any kind. The commercial and botanical sources of each should be authenticated. The practical value of the collection will largely depend upon the completeness and accuracy of this portion of the exhibit.

d. Sections of roots, stems, barks, etc., to show structure, fracture, or other physical characters that may assist in their identification, with drawings of the same, magnified if necessary.

e. Preparations, official and other, of which the drug or any product of the drug constitutes the fundamental ingredient.

2. Products of fermentation and distillation will include the products of the acetous and vinous fermentations, and the derivatives chloroform, ether, etc., as well as distillates, such as carbolic acid, pyroligneous acid, etc.

3. Medicines of animal origin to follow the usual classification of the animals from which the crude drug is obtained.

Each group of specimens, arranged under one head, to have a descriptive card, giving in brief terms the most important facts relating to general character, source, commercial varieties, etc.

Each specimen to have its label, giving scientific and vernacular names, and such special information as can be condensed within the prescribed limits.

It is intended that the labels shall be plain enough to be comprehended by all visitors, while, at the same time, technically correct.

The following is a sample of the label prepared for aconite:

ACONITE ROOT.

Aconitum, U. S.

The roots of *aconitum napellus*, *Lin.* An herbaceous perennial of the order *Ranunculaceæ*, growing in the mountainous districts of Europe, Asia, and Western North America. Contains aconitia, pseudoaconitia, aconina, etc.

Anodyne, sedative, poisonous. Dose, 0.06 to 0.12 grams.

No. 49,560.—Gift of W. H. Schieffelin & Co. Arranged by the Medical Department of the Navy.

There is also a collection of Chinese drugs, comprising 625 specimens, well preserved, which were sent to the Centennial Exposition by the Chinese Government, and afterwards presented to the United States.

In June, 1881, a circular was issued by Prof. Baird through the State Department to U. S. Ministers, and through the Navy Department to Naval Medical Officers, requesting information as to the pharmacopœias in use in different foreign countries. Most countries were heard from, and through the information so obtained the books were sent for, and the Library of the Museum has now about twenty different pharmacopœias, representing Great Britain, France, Germany, Mexico, Denmark, Holland, Belgium, Sweden, Norway, Russia, Austria, Switzerland, Greece; Spain, Portugal, Hungary, India, and United States. Asia has no special pharmacopœia, except British India. Africa has none. South America has none. In South America the French, German, and United States pharmacopœias are in use; in fact each druggist appears to use that of his own nationality. A study of these

authorities sufficiently illustrates the necessity for an International Pharmacopoeia.

Dr. Flint is now engaged in making a critical comparative examination of these pharmacopoeias, and tabulating a list of the preparations found in each. The object of making this list is for convenience in completing the Museum collection, but the results of his labors in this direction will be published as a Report in the Proceedings of the National Museum in due time.

The section of Food Products is intended to show all foods in different stages of preparation; all beverages, whether nutritious, stimulant, or narcotic, from all parts of the world. As a nucleus of this collection, a series of standard food substances of the United States is now being contributed by the firm of H. K. & M. B. Thurber, grocers, of New York. There is also a series of Chinese foods, 500 in number, from the Centennial Exposition, and a large collection of foods of North American Indians, gathered by the various Government expeditions. Steps are being taken to secure like exhibits from all parts of the world through authorized collectors of the National Museum. These products will be labelled with the common names, and the scientific name of the substance from which derived; the chemical composition will be given; description of preparation; statistics of production, etc.

As adjunct to this section, practical illustrations will be introduced, such as a day's ration of people of different occupations—for instance, a day-laborer. Casts will be shown of the proper amount of each kind of food, as bread, potatoes, beef, butter, and milk. In the same connection, the manner of cutting up various food-animals will be shown by casts—for example, a side of mutton, showing the different cuts, the chemical composition, and nutritive value of each portion on special labels. This can manifestly be made of great value to physicians, as in the case of foods for invalids and infants alone. The analysis and food value of each will be given with the specimen.

In chemistry, there is a complete series of chemical elements obtained from Schuchardt, of Dresden.

Powers & Weightman, of Philadelphia, are now preparing, as a donation, specimens of every known chemical compound obtainable in a pure state.

Methods employed in chemical processes will be shown in the progressive stages of preparation, as far as possible, and a full assortment of chemical apparatus will be kept on exhibition.

THE PUBLIC HEALTH.—For the week ending March 11, the number of deaths from *small-pox*, not previously published, were as follows: Brooklyn, 2; Hudson Co., N. J., 6; New Orleans, 6; and Richmond, Va., 2. In the latter place, 13 new cases were reported during the week. There were no deaths from this cause in San Francisco during the week ending February 25, and but 2 in the succeeding week. *Cerebro-spinal meningitis* caused 2 deaths in Hudson Co., N. J.; 6 in Buffalo, and 3 in Detroit. *Diphtheria* is still on the increase in Brooklyn, 17 deaths being reported, against 9 and 14 the two previous weeks; 6 in Hudson Co., N. J.; 4 each in Buffalo and Detroit, and 2 in the District of Columbia. There were 28 deaths from *scarlet fever* in Brooklyn; 6 in Hudson Co.; 5 in Detroit, and 4 in Buffalo. *Measles* is present in Brooklyn, Hudson Co., Buffalo, Detroit, and San Francisco; but in no place, except San Francisco, is the mortality significant. An excess of deaths from *puerperal diseases* is noticed in Hudson Co., where the number reached 10, compared with 7 in Brooklyn, 5 in Buffalo, and 1 each in the District of Columbia and Detroit. For the weeks ending February 25, and March 4, the aggregate of deaths from *consumption*, *bronchitis*, and *pneumonia*, was, respectively, 36.66 and 34.4 per

cent. of the total mortality. During the fortnight there were 3 deaths from diphtheria, 3 from typhoid fever, 11 from measles, 4 from scarlet fever, and 2 from small-pox.

For the week ending March 18, the principal causes of death in a number of prominent places throughout the country were as follows:

Small-pox.—There were 12 deaths from this cause in New York City; 10 in Philadelphia; 1 in Boston; 1 in St. Louis; 33 in Cincinnati; 3 in Hudson County, N. J.; 1 each in Wilmington, Del., and Memphis; 11 in Pittsburgh, with 44 new cases reported; 6 in Allegheny, Pa.; and 8 new cases but no deaths in Dayton; 3 in Milwaukee, and 3 new cases; and 5 new cases and no deaths in Brooklyn. In all these places the disease does not appear to be making any headway, the records showing but a slight change as compared with those of the preceding week. In South Bethlehem, Pa., the progress of the epidemic of small-pox appears to have been checked. Within the past two weeks, the period covering the outbreak of the disease, about 250 cases have been reported, but the precise number of deaths has not been ascertained; the mortality, however, is reported to have been 32. From the 17th to the 20th, inclusive, 18 deaths have occurred. The Chief Burgess states, officially, that "not a single case of small-pox has occurred where there had been recent successful vaccination." Within the past few days a very general vaccination of the inhabitants has taken place, and a rapid abatement of the epidemic may be looked for, though cases of the disease may yet develop from among those exposed to the infection previous to vaccination. The alarm created throughout the Lehigh Valley has caused a very general resort to vaccination, so that the experience of South Bethlehem is not likely to be repeated in that district.

Cerebro-spinal Meningitis.—In fifteen places, with an aggregate population of about 3,850,000 inhabitants, the total number of deaths from this disease during the week amounted to 14. These deaths were distributed among seven cities, as follows: New York City, 3; Philadelphia, 1; St. Louis, 2; Cincinnati, 2; Indianapolis, 2; Pittsburgh, 1; and Milwaukee, 3.

Diphtheria.—A slight decrease in the deaths from diphtheria is noticed in New York City; and an increase in the number in Philadelphia, Boston, and Hudson County, N. J. The record for the week is as follows: New York City, 36; Brooklyn, 10; Philadelphia, 13; St. Louis, 3; Boston, 11; Providence, R. I., 1; Hudson County, N. J., 9; Pittsburgh, 2; Milwaukee, 1, with 4 new cases.

Scarlet Fever.—There was no abatement of this disease in New York City, where there were 81 deaths against 79 in the preceding week. The disease is nearly stationary in Philadelphia, where there were 8 deaths. In St. Louis there was an increase from 1 the previous week to 7 this week. There were no deaths in Boston, but 5 new cases were reported. Hudson County, N. J., reports 9 deaths; Brooklyn, 26; Pittsburgh, 3; Louisville, Wilmington, Del., and Charleston, each 1. 18 new cases were reported in Milwaukee.

Typhoid and Typhus Fevers.—Typhoid fever is still quite prevalent in Philadelphia, though there was a slight improvement in the death-rate from this cause. There were 11 deaths during the week; 8 in New York; 5 in St. Louis; 3 each in Boston, and Hudson County, N. J.; 2 in Milwaukee; and 1 each in Louisville, Charleston, Pittsburgh, Indianapolis, Providence, Wilmington, Del., and New Haven. Only 1 death is reported from typhus fever, and that occurred in New York City.

Both *measles* and *whooping-cough* are prevalent in New York City, and the latter disease in Boston. From measles there were 15 deaths in New York; 5 in Brook-

lyn; 2 in Philadelphia; and 1 in Boston. Whooping-cough caused 18 deaths in New York; 3 in Brooklyn; 2 each in Philadelphia and Cincinnati; 8 in Boston; and 1 each in Providence, Pittsburg, and Indianapolis.

There were 6 deaths from *puerperal fever* in St. Louis, where none were reported the preceding week, 3 in Brooklyn, and 2 in Pittsburg. *Consumption* and *acute pulmonary diseases* still maintain a high death-rate.

The total number of deaths in Memphis in the month of February was 77. Of this number small-pox caused 5 deaths; malarial fever, 2; diarrhoeal diseases, 2; consumption, 15; pneumonia, 12; and bronchitis, 3. Thirty-three per cent. of the mortality was of children under five years of age. The proportion of deaths among colored and whites was as 50 to 27.

HEALTH IN MICHIGAN.—The State Board of Health Bulletin states that for the week ending March 11, 1882, the reports indicate that pneumonia and bronchitis have increased, and that influenza, rheumatism, neuralgia, and intermittent fever have decreased in area of prevalence.

Bronchitis and pneumonia seem to have decreased, and influenza and rheumatism to have increased in area of prevalence with the rise in temperature and humidity, and falling off in ozone during the week ending March 4, and again to have increased, and decreased respectively during the following week (ending March 11) with the fall in temperature and humidity, and the rise in ozone.

Diphtheria was reported present during the week ending March 11, and since, at 28 places; scarlet fever at 14 places; measles at 10 places; and small-pox at 2 places, as follows: at Detroit, March 11, at Spalding, Menominee County (2 deaths), and among the Indians near Spalding, March 15, 1882. At Stanton, Montcalm County, is one case of eruptive disease following vaccination which may be mild varioloid.

PREVENTION OF THE INTRODUCTION OF CONTAGIOUS DISEASES.—At a special meeting of the Michigan State Board of Health, held at Ann Arbor, March 1, 1882, the following preamble and resolutions were adopted:

Whereas, Measures for the prevention of the introduction of diseases from foreign countries into the United States are of national importance, affecting not only the seaboard and gulf States, but also States in the interior, as evidenced a few years since by the wide-spread disaster from yellow fever, and recently by the wide diffusion of imported small-pox; therefore,

Resolved, That in the judgment of this Board, such measures should be continued by the National Board of Health, and undertaken by the United States Government, as will best and most effectually prevent the introduction of diseases into the United States.

Resolved, That our Senators and Representatives in Congress be, and they hereby are, respectfully and earnestly requested to use their influence towards securing any appropriate legislation which may be necessary to this end.

The following preamble and resolutions were also adopted:

Whereas, The prevention of the introduction of yellow fever into the United States is a subject of national importance,

Resolved, That in the opinion of this Board it is proper for the Louisiana Board of Health to ask, and it is the duty of the National Board of Health to continue to give, aid in the prevention of the introduction of yellow fever into the Mississippi Valley.

Resolved, That—because of the duties of the National Board of Health, in aiding the prevention of the introduction of yellow fever, and in giving accurate infor-

mation to all States interested in the sanitary condition of the Mississippi Valley—1. An inspector of the National Board of Health should be placed at Eadsport, to act conjointly with the officer of the State Board of Health, in securing the exclusion of infected vessels from the Mississippi River, and in notifying such vessels that they must be thoroughly disinfected. 2. That a representative of the National Board of Health should be stationed at the Mississippi River Quarantine Station. 3. That it is the duty of all health authorities in Louisiana, and in the gulf States, promptly to communicate to the National Board of Health any and all possible information relative to the occurrence of yellow fever, or of a case which may be suspected to be yellow fever, and in every possible way to aid the National Board of Health to perform its duties in giving accurate information for the guidance of State and other Boards of Health throughout this country.

MEDICAL COLLEGE COMMENCEMENTS.—The Annual Commencement of Bellevue Hospital Medical College was held in New York on the 15th of March, and the degree of M.D. was conferred on 163 graduates. Dr. J. S. Billings, U. S. A., delivered the address to the graduates.

The Twenty-second Annual Commencement of the Miami Medical College took place on March 9, 41 diplomas being granted.

The Commencement Exercises of the Medical Department of Nashville and Vanderbilt University were held on February 25, 168 medical diplomas being conferred.

The Seventy-fifth Annual Commencement of the University of Maryland was held on March 1, 69 degrees in medicine being granted.

The Tenth Annual Commencement of the College of Physicians and Surgeons, in Baltimore, was held on March 1, 151 degrees being granted.

The Baltimore Medical College held its First Commencement on March 7, and conferred 17 degrees, one being to a woman.

The Twenty-fourth Annual Commencement of the Atlanta Medical College was held on February 27, and the degree of M.D. was conferred on 57 graduates.

The Thirty-ninth Annual Commencement of the Rush Medical College was held on February 21, when 179 degrees were conferred.

The Annual Commencement of the Columbian University was held at Washington on March 16, and the degree of M.D. was conferred on 8 candidates.

THE MUSCULAR FORCE OF A CROCODILE'S JAW.—An experiment has been lately made in Paris by Drs. REGNARD and BLANCHARD on the measurement of the power exerted by the masseter muscle in a crocodile. Ten live crocodiles of the species *C. galeatus* or *siamensis*, that had been sent in large cases from Saigon to M. Paul Bert, afforded the opportunity for such experiments. Some of these animals were as much as 10 ft. in length, and weighed about 154 lbs. The difficulty of managing such creatures in the laboratory was, of course, considerable. The crocodile was fixed with ropes on a heavy table; the lower jaw kept in contact with the table by a cord, while the upper was raised by means of a cord attached at the extremity and passing up to a beam overhead. A dynamometer was inserted in this cord, and was affected when the animal was stimulated with an electric current. In this way, a crocodile of about 120 lbs. weight gave an indication of 308 lbs. (140 kilogrammes). The application of the cord at the end of the snout was necessary but unfavorable, seeing the application of the force is thus at the end of a long lever, and there is at least five times more space between this point and the insertion

of the masseter muscle, than between the latter and the joint of the jaw—the fulcrum. Hence the masseter really produces a force five times that indicated by the dynamometer, or about 1540 lbs. (700 kilogrammes). This extraordinary force, it should be remembered, was that of an animal somewhat weakened and at a low temperature. The force (of about 308 lbs.) is really applied at the end of four large teeth that project beyond all the others, and, considering the surface here represented, the authors estimate the pressure, while the bite is executed by the extremity of those teeth, at nearly 400 atmospheres. Making similar experiments with an ordinary sporting dog, they obtained in the dynamometer a pressure of about 72 lbs.; while the effect at the insertion of the masseter was about 360 lbs. The pressure at the point of the canine teeth would be about 100 atmospheres. It is calculated that the crocodile is about one-third stronger than a dog of the same weight would be.—*London Med. Record*, Feb., 1882.

THE NEW YORK CODE.—The Medical and Surgical Society of Montgomery, Alabama, at its meeting, held on Wednesday, March 8, had its attention called to the new code of the New York State Medical Society by its President, Dr. R. F. Michel, and Dr. Wm. O. Baldwin, with some eloquent prefatory remarks, offered the following preamble and resolutions:

Whereas, We, the members of the MEDICAL AND SURGICAL SOCIETY OF MONTGOMERY, have noticed with deep regret that the Medical Society of the State of New York, at its recent meeting, in February last, established a code of ethics which is in direct conflict with a material part of the laws and regulations established by the American Medical Association, therefore,

Resolved, First, That all the changes, mutilations, additions, omissions, or transpositions, made, or attempted to be made, by the Medical Society of the State of New York in the laws and ethics established by the American Medical Association are either unnecessary and unauthorized, or unwise and mischievous, and deserve the condemnation of all good men in the profession.

Second, That the declaration of principles contained in the "Rules governing Consultations," as adopted by the New York State Medical Society, in which they assert the right to "meet in consultation *legally* qualified practitioners of medicine," without further qualification or restriction, is directly at war with the expressed provisions of the Code of Ethics established and recognized by the American Medical Association, and in its scope and tendencies calculated to break down the barriers which have so long existed between the learned and scientific physician and the vain and ignorant charlatan. In that we all know that amongst the "*legally* qualified physicians" of every State in the Union are to be found the most arrant quacks and mountebanks, and that by thus offering them this seeming equality, we would be giving to them a countenance and respectability which would enable them to ply their nefarious vocation with greater success to themselves, and corresponding injury to the public.

Third, That Art. iv., Sec. 1, of the Code of Ethics, though sufficiently clear and defined in the original enactment, is still further explained in the preamble and resolution found in vol. xx., p. 30, of the *Transactions*, and reads as follows: "*Whereas*, The proper construction of Art. iv., Sec. 1, Code of Ethics, American Medical Association, having been called for relative to consultations with irregular practitioners, who are graduates of regular schools; *Resolved*, That said Art. iv., Sec. 1, of Ethics of American Medical Association excludes all such practitioners from recognition by the regular profession."

Fourth, That the Code of Medical Ethics is a part of the constitution or plan of organization adopted by the American Medical Association, and enters into its organic law, and is above State organization; and that all physicians who are members of the American Medical Association, or who belong to societies in affiliation with that body, are bound by its obligations and restrictions, and, therefore, amenable for violation of its laws; and that even if such were not the case, it would be unwise to disturb a custom so salutary to the profession, and which has been approved and sanctified by the wisdom and experience of ages.

Fifth, That we see no necessity for any change in the Code of Ethics as at present constituted by the American Medical Association; that, embodying, as it does, the ethical laws which should regulate the intercourse of physicians of the United States with each other and the public, its provisions are wise, its scope ample, its restrictions comprehensive, just, and honorable; and, if change or amendment should be deemed necessary, this can only be properly effected through the power which has long been acknowledged as the only one to exercise supreme control over its provisions, and that, according to its express terms, this can only be done "at the annual meeting next subsequent to that at which such amendment or alteration may have been proposed, and then only by the voice of three-fourths of all the delegates in attendance."

Sixth, That as the action of the Medical Society of the State of New York is without a precedent for this strange departure from our time-honored code of laws, we trust it may remain without a following, and that the American Medical Association, at its approaching annual meeting, will put its seal of condemnation upon their action in a manner calculated to vindicate its own dignity and honor.

Seventh, That we deeply sympathize with the noble minority who fought against this cruel and suicidal action of the majority of the Society; that we share their mortification, and that we express the hope that they will at once call a convention of such men in the State as may be willing to unite with them in forming another State Association, composed of material that will be readily admitted to fellowship in the American Medical Association, in order that the State may not be without its proper representation in that body at its meeting at St. Paul in June next.

These resolutions were seconded by Dr. J. S. Weatherly; and, after approving remarks by Drs. J. B. Gaston, S. D. Seelye, Jones, Owen, Johnston, Blue, Jackson, and Lee, were unanimously adopted, and it was directed that they be forwarded to THE MEDICAL NEWS for publication.

SANITARY CONVENTION.—A Sanitary Convention, under the auspices of the State Board of Health, will be held in the city of Greenville, Michigan, on Tuesday and Wednesday, April 11 and 12, 1882.

There will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

The officers of the Convention are as follows: President, Rev. J. L. Patton, Greenville; Vice-Presidents, Hon. E. H. Stanton, Ionia; Rev. A. A. Brown, Greenville; Hon. H. H. Hinds, Stanton; Charles P. Bigelow, M.D., Big Rapids; Hon. J. P. Shoemaker, Amsden; Hon. R. C. Miller, Greenville; Secretary, Charles S. Sheldon, M.D., Greenville.

Manufacturers of sanitary apparatus or appliances, and dealers in the same or in any article conducive to health, are invited to send samples of their wares for exhibition at this Convention, in accordance with the regulations.

Judges will be appointed to examine the various arti-

cles on exhibition, and certificates of merit will be awarded to such articles as are deemed worthy.

Among the subjects which it is desired to have presented and discussed are the following:

1. The Prevention and Restriction of Small-pox, Diphtheria, and Scarlet Fever.
2. The Present and Prospective Water-supply of Greenville.
3. The Disposal of Decomposing Organic Matter.
4. Pure Air; Why we should have it, and How we shall get it.
5. School Hygiene.
6. The Relation of the Newspaper Press to Sanitary Reform.

The papers read are expected to be original contributions, which when read are to be considered the property of the Convention.

THE BRITISH MEDICAL PROFESSION.—According to the official *Medical Register*, the roll of the profession in Great Britain includes 23,275 registered persons.

DR. ROBERT P. HARRIS, of Philadelphia, has received the honor of an election to Corresponding Membership in the Reale Accademia Medico-Chirurgica, of Naples, Italy.

LITERARY NOTE.—The first regular medical journal was published in Paris in 1679, and was entitled *Les Nouvelles Déconvertes sur toutes les parties de la Médecine*.

COMPETITION FOR MEDICAL APPOINTMENTS.—In filling the position of surgeon to the Great Western Railway, England, a position worth £600 per annum, the authorities were obliged to make a selection from over 600 candidates.

A NEW street in the neighborhood of the General Hospital in Vienna is to bear the name of Skoda Street (*Skodagasse*), in honor of the celebrated physician and clinical professor.

OBITUARY.

DIED at Vienna, Prof. A. Duchek, Professor of Internal Medicine in the University of Vienna, on March 2, at 4½ o'clock, P.M. He had been ill for two weeks. Dr. Kretschky, his assistant, and Dr. Barbien, one of Prof. Billroth's assistants, were his attending physicians. Prof. Bamberger was called in consultation. He suffered from fatty degeneration of the heart, but no immediate fatal result was expected. Upon March 1 symptoms of gastric catarrh were noticed, and this complication proved to be the forerunner of the immediate cause of death, cardiac paralysis. He was perfectly conscious up to the time of death. On Thursday, at 3 o'clock, P.M., he spoke to his wife, who was pouring out some wine. Shortly after this his wife, with Dr. Kretschky, left the room, an old nurse, for eleven years actively engaged in Prof. Duchek's wards, alone remaining. At 3½ o'clock, P.M., the nurse noted alarming appearances, and hurriedly summoned the wife and attendant physician. Prof. Duchek died peacefully an hour later.

Prof. Duchek was a Knight of the Franz-Joseph Order; he leaves behind him a widow, the sister of the body-physician of the Queen of Spain, Hofrath Dr. Ritter von Riegl.

Adalbert Duchek was born in Prague, 1824; his father was one of the most celebrated physicians in Prague. He completed his training in arts and sciences in the Prague Gymnasium, and received his

medical degree, in 1848, from the University of his native city. After his appointment as second physician in the Prague Lunatic Asylum, he studied pathological anatomy very closely for the space of two years. He left the Lunatic Asylum to become the Assistant in Internal Medicine of Prof. Hamminik.

In 1855 he was appointed Professor of Internal Medicine in the Lemberger University. In 1856 he was elected to the same Professorship in Heidelberg. Two years later he was recalled to Vienna, and appointed to the Chair of Internal Medicine in the "Joseph Akademie," a military medical school, which has since been united with the Medical Department, University of Vienna.

In 1871 Skoda retired from active work, and Oppolzer, Skoda's successor, warmly recommended Duchek's election to the second professorship in Internal Medicine, made vacant by Oppolzer's promotion. He was elected. After Oppolzer's death, Duchek was appointed First Professor, Internal Medicine, University of Vienna. Most of Duchek's extended scientific work was performed while professor in the Military Medical School "Joseph Akademie." As a practitioner he was very widely known throughout Continental Europe, and, at one period, enjoyed the most lucrative and distinguished practice in Vienna. Through his labors he amassed a large fortune. Personally, he was beloved by his colleagues and universally admired by his students. His loss, as the most distinguished of Skoda's pupils, is greatly felt by the Faculty and Direction of the "K. K. Allgemeines Kraukenhaus."

Prof. Schroetter is popularly named as his probable successor. This gentleman is known to Americans chiefly by his studies in laryngology.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 14, TO MARCH 20, 1882.

BROWN, H. E., Major and Surgeon.—Having reported at these Headquarters, will proceed to Jackson Barracks, La., and report to the Commanding Officer for duty.—*S. O. 32, Department of the South, March 14, 1882.*

PORTER, JOSEPH Y., Major and Surgeon.—Granted leave of absence for one month, with permission to apply for an extension of one month.—*S. O. 32, C. S., Department of the South.*

The following named officers of the Medical Department will report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, return to their stations:

Capt. WM. H. KING, *Assistant Surgeon*, Fort McHenry, Md.
Capt. H. S. TURRILL, *Assistant Surgeon*, Madison Barracks, N. Y.

Capt. W. REED, *Assistant Surgeon*, Washington Barracks, D. C.
Capt. H. S. KILBOURNE, *Assistant Surgeon*, Fort Porter, N. Y.
Capt. M. W. WOOD, *Assistant Surgeon*, Fort Brady, Mich.
Capt. R. W. SHUFFELDT, *Assistant Surgeon*, Washington, D. C.
Capt. H. O. PERLEY, *Assistant Surgeon*, Fort Columbus, N. Y. H.

Capt. H. G. BURTON, *Assistant Surgeon*, Fort Hamilton, N. Y. H.
Capt. L. M. MAUS, *Assistant Surgeon*, at expiration of his present leave of absence, and then to return to his proper station, David's Island, N. Y.

Capt. WM. H. CORBUSIER and WM. B. DAVIS, *Assistant Surgeons*, at the expiration of their present leave of absence, and upon conclusion of their examination, to report by letter to the Surgeon-General.—*S. O. 58, A. G. O., March 13, 1882.*

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.